

## SEQUENCE PROTOCOL

09/623746  
533 Rec'd PCT/PTO 08 SEP 2000

&lt;110&gt; metaGen Corporation for Genome Research

&lt;120&gt; Human nucleic acid sequences from prostate tissue

&lt;130&gt; 51570AWOM1KKK24-P

&lt;140&gt; PCT/DE99/00722

&lt;141&gt; 1999-03-09

&lt;160&gt; 295

&lt;210&gt; 1

&lt;400&gt; 1

000

&lt;210&gt; 2

&lt;211&gt; 1437

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 2

|            |            |            |            |            |             |      |
|------------|------------|------------|------------|------------|-------------|------|
| ctccttggaa | gtcccccttc | agctcccaga | ctctgcccc  | ggctccggct | ccggctcaga  | 50   |
| gccagacaca | gttccatgtt | cagccccaga | cccagcccaa | gcctcaggtc | caactccatg  | 120  |
| tccagtccca | gacccagcct | gtgtctttgg | ctaacaccca | gccccgaggg | ccccagcct   | 180  |
| catctccggc | tccagccctt | aagtctttct | cagtgaactc | taagttaact | cctgtggctt  | 240  |
| ccaagtccag | tcctggagcc | ccaggtggat | ctgggtcaca | accaaataaa | aaattggggc  | 300  |
| accccgaaag | tctttctgct | ggcacaggct | cccccaacc  | tcccagcttc | acctatgcc   | 360  |
| agcagaggga | gaagccccga | gtgcaggaga | agcagcacc  | cgtgccccca | ccggctcaga  | 420  |
| acaaaaacca | gggtgcgtcc | cctggggccc | cagggccctt | gactctgaag | gaggtggagg  | 480  |
| agctggagca | gctgacccag | cagctaattg | aggacatgga | gcatactcag | aggcagaatg  | 540  |
| tggctgtcaa | cgaactctgc | ggccgatgcc | atcaaccctt | ggcccgggcg | cagcagccgt  | 600  |
| ccgcgtctta | gggcagctgt | tccacatcgc | ctgcttcacc | tgccaccagt | gtgcgcagag  | 660  |
| ctccagggcc | agcagttcta | cagtctggag | ggggcgccgt | actgcgaggg | ctgttacact  | 720  |
| gacaccctgg | agaagtgtaa | cacctgcggg | gagcccatca | ctgaccgcct | gctgagggcc  | 780  |
| acgggcaagg | cctatcacc  | gcactgcttc | acctgtgtgg | tctgcgcscg | ccccctggag  | 840  |
| ggcacctcct | tcctcgtgga | ccaggccaac | cggccccact | gtgtccccga | ctaccacaag  | 900  |
| cagtacgccc | cgaggtgctc | cgtctgctct | gagcccatca | tgcctgagcc | tggccgagat  | 960  |
| gagactgtgc | gagtggctgc | cctggacaag | aacttcacca | tgaagtgtta | caagtgtgag  | 1020 |
| gactgcggga | agccccctgt | gattgaggca | gatgacaatg | gctgcttccc | cctggacggt  | 1080 |
| cacgtgctct | gtcggaagtg | ccacactgct | agagcccaga | cctgagtgag | gacaggccct  | 1140 |
| cttcagaccg | cagtccatgc | cccattgtgg | accacccaca | ctgagaccac | ctgcccccac  | 1200 |
| ctcagttatt | gttttgatgt | ctagccccct | ccatttccaa | cccccccta  | gcataccagg  | 1260 |
| tgccttgacc | caggacccaa | catggtctag | ggatgcagga | tccccgcctt | ggggctctggt | 1320 |
| cctcgcccat | cctgcaggga | ttgcccaccg | tcttcagac  | accccacctg | agggggggcac | 1380 |
| aagggttagt | gctgctgctt | tcactgctgc | acccgcgccc | tcggccggcc | ccccgag     | 1437 |

&lt;210&gt; 3

&lt;211&gt; 707

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 3

|             |            |            |            |             |            |     |
|-------------|------------|------------|------------|-------------|------------|-----|
| tgcggcccg   | gccttaaagc | gtccatttcc | cagcggccct | ccgctgcgag  | accgcagccc | 60  |
| ttctctggag  | tctcagagcc | gcaagacacc | acgactccca | gaggaccttg  | cgtcggggca | 120 |
| gaaagactac  | tccttcaga  | ggcctctg   | gcgcgcgac  | aggaagcggc  | gggcgagccg | 180 |
| agtgtccttg  | cgcgtggatc | cgagcgacca | tgggtggccc | gggtgtggct  | ctgatgaggt | 240 |
| tcctcatcaa  | gggaagtgtg | gtcggggggc | ccgtctacct | gggtgtacgac | caggagctgc | 300 |
| tggggccctag | cgacaagagc | caggcagccc | tacagaaggc | tggggagggt  | gtcccccccg | 360 |

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ccatgtacca gttcagccag tacgggtgtc agcagacagg cctgcagata ccccagctcc 420
tagcccccctcc aaagattttac tttcccctcc gtgactcctg gaatgcaggc atcatgacgg 480
tgatgtcagc tctgtcgggtg gccccctcca aggcccgga gtactccaag gagggctggg 540
agtatgtgaa yggcgccacc aagttagcag tcagcagggc cgcctggccc ggccagaacg 600
ggcagggctg ccactgacct gaagactccg gactgggacc ccactccgag ggcaggcctc 660
ccgattgccc gcccataaaa ygacttcaga agtgaaaaaa aaaaaaa 707

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<210> 4
<211> 1265
<212> DNA
<213> homo sapiens

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<400> 4
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aatgggcaga catttggtta attgtgccag atacctaaaa tgtatgttca gaaaagcatt 180
ttatcaactc agaaatatga cttatttcta qatttcatgg cttaatgaat tttttcattg 240
ttatatatac caaagaggct tacgggttca ttgattgggt tgaaaaccag acagacggcc 300
gtgagccacc acgcccagcc aagatgaact ccttaaggac aggatcttgt aagtgattga 360
cttcttttca gttccatgat cttgagatta tttttagctt tataaatcca gcagtggcag 420
ggcccgtgga gaatcagggt aatgaggtaa aggccttctg tctatttgtt gccaaaggcca 480
catcaccaat tttctcgatt taaaaaactg tcaagagatt tatcttccca ttgcagggtt 540
taaagtggag attctgaagt ggaaaatagg tactgtcaga acaaagctac ctggaaaacag 600
catagagtga agcctttcgt gagggcttgc aggcgctgc tgagtggcag tttacagaag 660
aggctcgagg gtgagcctct tagcaggaca gaaaacaagg cagcagcgca cctgccaccc 720
cttcacgagc tgctccttga gcctaaaaag taggctttat tcatcccttc tgttcattta 780
ccaacctggg ggattgatac gaccggggaa aatgttccca aaccaggaag ctgcgttagc 840
gaatcagctt tggtaagatc tcgccaacag ctagctgctt aggagtacc ccacgatacg 900
cacagcacac cactgtccct tcaactgcact ttcttccctg cttaggtagt tgggcttgcc 960
accctagttt gctttttagt tggtttggca aggttagaag gcctcgggcc cctctgtcat 1020
gctgggaagt gcctactctc tgggccactg ctgcagaggc cgtggcactt gtcatgggtt 1080
tggaagacc agccatctgc agcagaggca gcatatccca ttgcaaggag aggaactgaa 1140
cggagtaatt attctactct tctttttaca taaatggttt aatttaaata attcaaaatt 1200
tggaatttcc tttcacagat actgataatc ctttccagtt cttaaataaa aactgcactt 1260
ggatt 1265

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<210> 5
<400> 5
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<210> 6
<211> 1330
<212> DNA
<213> homo sapiens

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```
<400> 6
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gatcatctcc gacctgtgta aactctataa cctccctcag catccagatg tggagatgct 120
ggatcaaccc ttgccagcag agcagtgcac acaggaagac gtgtcttcag aagatgaaga 180
tgaggagatg cctgaggaca cagaagactt agatcactat gaaatgaaag aggaagagcc 240
agctgagggc aagaaatctg aagatgatgg cattggaaaa gaaaacttgg ccatcctaga 300
gaaaattaaa aagaaccaga ggcaagatta cttaaatggg gcagtgtctg gctcgggtga 360
ggccactgac cggctgatga aggagctcag ggatatatac cgatcacaga gtttcaaagg 420
cggaaactat gcagtcgaac tcgtgaatga cagctctgtat gattgggaatg tcaaaactcct 480
caaagttagc caggacagcg ctttgcacaa cgatctccag atcctcaaag agaaagaagg 540
agccgacttc attctactta acttttccct taaagataac tttccctttg acccaccatt 600
tgtcagggtt gtgtctccag tctctctctg agggatgtt ctgggaggag gggccatctg 660
catggaaact ctcaccaaac agggctggag cagtgcctac tccatagagt cagtatcat 720
gcagatcagt gccacactgg tgaaggggaa agcacgagtg cagtttggag ccaacaaatc 780
tcaatacagt ctgacaagag cacagcagtc ctacaagtcc ttgggtgcaga tccacgaaaa 840
aaacggctgg tacacacccc caaaagaaga cggctaacc tggagtatca ccttctctcc 900
ctccccaggc accactggac caattacct tgaatgctgt atttggatct cacgctgcct 960

```

```

ctgtgggttcc ctccttcatt tttcctggac gtgatagctc tgcctattgc aggacaatga1020
tggctattct aaacgctaag gaaaaaaaaa aaacacagaa ctgtttcaag tactcaagac1080
tgacttacag accaaccacac cacccttgctg gaacccttgc tagcaggcat tcttataaaa1140
gaaactttcg agcctcctta tattgctgga aactcagctg tgctccagac tagagcctcc1200
ttacctatgc tatggatttt taatttatct tctcttattt catgtacact gctttttttg1260
gttacagctg atgatggatg tgtatgaaaa aaatgtatct ttgggaaaaa aattacagtt1320
tgtaattctg                                     1330

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<210> 7
<211> 760
<212> DNA
<213> homo sapiens

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```
<400> 7
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ggagccgctg ggcagcgact ccgaagggtg taactgtctg gcctatgatg aagccatcat 120
ggctcagcag gaccgaattc agcaagagat tgctgtgcag aacctctctg tgtcagagcg 180
gctggagctc tcggtcctat acaaggagta tgctgaagat gacaacatct atcaacagaa 240
gatcaaggac ctccacaaaa agtactcgta catccgcaag accaggcctg acggcaactg 300
ttctatctcg gctttcggat tctccactt ggaggcactg ctggatgaca gcaaggagt 360
gcagcgggtc aaggctgtgt ctgccaagag caaggaagac ctgggtgtcc agggcttcac 420
tgaattcaca attgaggatt tccacaacac gttcatggac ctgattgagc aggtggagaa 480
gcagacctct gtgcgcgacc tgctggcctc cttcaatgac cagagcacct ccgactacct 540
tgtgtgtctac ctgcggctgc tcacctcggg ctacctgcag cgcgagagca agttctctga 600
gcacttcato gaggggtggac ggactgtcaa ggagttctgc cagcaggagg tggagcccat 660
gtgcaaggag agcgaccaca tccacatcat tgcgctggcc caggccctca gcgtgtccat 720
ccagggtggag tacatggacc gcggcgaggg cggcaccacc aa 760

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<210> 8
<211> 1228
<212> DNA
<213> homo sapiens

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```
<400> 8
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gaaaagtttc tgaacatggg tgcacccctg ggagtgggccc tgggtctctg ctttgtgtcc 60
tccattggga tctatgtttc ttcacctac ccacccgtgg ctggggccac tctttactca 120
gtggcaatgt acgggtggatt agttcttttc agcatgttcc ttctgtatga taccagaaa 180
gtaatcaagc gtgcagaagt atcaccaatg tatggagttc aaaaatatga tcccattnac 240
tcgatgctga gtatctacat ggatacatta aatatattta tgcgagttgc aactatgctg 300
gcaactggag gcaacagaaa gaaatgaagt gactcagctt ctggcttctc tgctacatca 360
aatatcttgt ttaatggggc agatatgcat taaatagttt gtacaagcag ctttcgttga 420
agtttagaag ataagaaaaca tgtcatcata tttaaatgtt ccggtaatgt gatgcctcag 480
gtctgccttt ttttctggag aataaatgca gtaatcctct cccaaataag cacacacatt 540
ttcaattctc atgtttgagt gatttttaaaa tgttttggtg aatgtgaaaa cttaaagttg 600
tgtcatgaga atgtaagtct ttttctact ttaaaattta gtaggttcac tgagtaacta 660
aaatttagca aacctgtgtt tgcataattt tttggagtgc agaatttgt aattaatgtc 720
ataagtgatt tggagctttg gtaaaggagc cagagagaag gagtcacctg cagtcttttg 780
tttttttaaa tacttagaac ttagcacttg tgttattgat tagtgaggag ccagtaagaa 840
acatctgggt atctggaaac aagtggctat tgttacattc atctgctgaa cttaacaaaa 900
ctgttccatcc tgaaacaggc acaggtgatg cattctcctg ctgttgcttc tcagtgtctc 960
ctttccaata tagatgtggt catgtttgac ttgtacagaa tgttaatcat acagagaatc1020
cttgatggaa ttatatatgt gtgttttact tttgaatgtt acaaaaaggaa ataactttaal080
aactattctc aagagaaaaa attcaaagca tgaaatatgt tgctttttcc agaatacaaa1140
cagtatactc atgaaaaaaa aatgtttttt tatttttgca tattttattga actgtctaata1200
tgaatacagc ttgctcttgt cacctcaa                                     1228

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```

<210> 9
<211> 914
<212> DNA
<213> homo sapiens

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&lt;400&gt; 3

|             |             |             |            |            |            |     |
|-------------|-------------|-------------|------------|------------|------------|-----|
| ggcgggtggtc | cgccattttcg | tggacgcggg  | gtgagtgaga | gagtgggttg | gtgttggggc | 50  |
| ggaggaaaagc | gggaagactc  | atcggagcgt  | gtggatttga | gccgcggcat | tttttaaccc | 120 |
| tagatctcga  | aatgcctcgt  | gattcctgtc  | cattggactg | taagggttat | gtaggcaatc | 180 |
| ttggaaaacaa | tggcaacaag  | acggaatttg  | aacgggcttt | tggctactat | ggaccactcc | 240 |
| gaagtgtgtg  | ggttgctaga  | aacccacccg  | gctttgcttt | tgttgaattt | gaagatcccc | 300 |
| gagatgcagc  | tgatgcagtc  | cgagagctag  | atggaagaac | actatgtggc | tgccgtgtaa | 360 |
| gagtggaaact | gtcgaatggc  | gaaaaaagaa  | gtagaaatcg | tggccacacc | ccctcttggg | 420 |
| gtcgtcgccc  | tccgagatgat | tatcgttaga  | ggagtcctcc | acctcgtcgc | agatctccaa | 480 |
| gaaggagaag  | cttctctcgc  | agccggagca  | ggtccctttc | tagagatagg | agaagagaga | 540 |
| gacgcctgtc  | tcgggagaga  | aatcacaaagc | cgtcccgatc | cttctctagg | tctcgtagtc | 600 |
| gactctaggtc | aaatgaaaagg | aaatagaaga  | cagtttgcaa | gagaagtggc | gtacaggaaa | 660 |
| ttacttcatt  | tgacaggagt  | atgtacagaa  | aattcaagtt | ttgtttgaga | cttcataagc | 720 |
| ttgggtgcatt | tttaagatgt  | tttagctgtt  | caaactctgt | tgtctcttga | aacagtgcac | 780 |
| caaagggtgta | attctctatg  | gtttgaaatg  | gatcatacga | ggcatgtaat | accaagaatt | 840 |
| gttacttttac | aatgttccct  | taagccaaaa  | ttgaatttgc | tttgaacttt | tagttatgca | 900 |
| cagactgata  | ataa        |             |            |            |            | 914 |

&lt;210&gt; 10

&lt;211&gt; 1126

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 10

|             |             |            |             |            |             |      |
|-------------|-------------|------------|-------------|------------|-------------|------|
| gaggcagccc  | tgacactatg  | ccacctgctg | agctccctggg | tgtcactaga | gagcctcaca  | 60   |
| ctctccctaca | atggcctggg  | ctctaacatc | ttccgcctgc  | tagacagcct | gcggggccctg | 120  |
| tcaggccagg  | ctggatgtcg  | cctccgtgcc | ctgcatctca  | gtgacctgtt | ctcaccactg  | 180  |
| cccatacctgg | agctgacacg  | tgtatcgtg  | cgagcactgc  | ccctgctacg | ggtcctctct  | 240  |
| attcgtgttg  | accacccaag  | ccagcgggac | aaccttgggtg | tgccagggaa | tgacggggccc | 300  |
| cctagccaca  | taataggcga  | tgaggagata | ccagaaaact  | gcctggagca | gttggagatg  | 360  |
| ggnattttcca | cggggagccc  | agccagcccc | actgctgtgc  | tccgttctga | aggcctcggg  | 420  |
| ttctctgcag  | cagctgtccc  | tggatagtgc | cacctttgcc  | tctccccagg | atcttgggct  | 480  |
| tgttttgcaa  | acactcaaaag | agtacaacct | agccctgaaa  | agactgagct | tccatgacat  | 540  |
| gaatctcgtc  | gactgtcaga  | gcgaggtgct | ctttttgcta  | cagaatctga | ctctgcaaga  | 600  |
| gattaccttc  | tccttctgcc  | gtctgtttga | gaagcgccca  | gccaattttc | tgcttgagat  | 660  |
| ggttgtctgt  | atgaagggca  | actccacact | gaagggcctc  | cggctgccag | ggaaccgcct  | 720  |
| ggggaatgct  | ggcctgctgg  | ccttggcaga | tgtttttctca | gaggattcat | cctcctctct  | 780  |
| ctgtcagctg  | gacatcagtt  | ccaactgcat | caagccagat  | gggcttctgg | agttcgccaa  | 840  |
| gcggctggag  | cgctggggcc  | gtggagcctt | tggtcacctg  | cgcctcttcc | aaaactggct  | 900  |
| ggaccaggat  | gcagtcacag  | ccagggaagc | catccggcgg  | ctccgggcta | cctgccatgt  | 960  |
| ggttagcgac  | tcatgggact  | catcccaggc | cttcgcagat  | tatgttagca | ccatgtgatg  | 1020 |
| gggcccgtac  | ctcacagtct  | catgctcggc | acctcagct   | tcgaggggct | gaagcatggg  | 1080 |
| ctgcccagaa  | cccccaaccac | cagttctatc | ttctctcttc  | tgtgac     |             | 1126 |

&lt;210&gt; 11

&lt;400&gt; 11

000

&lt;210&gt; 12

&lt;211&gt; 538

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 12

|             |            |            |             |            |            |     |
|-------------|------------|------------|-------------|------------|------------|-----|
| tagaccactg  | aggagaccat | agagcggatg | ctttcatgca  | ccctttactg | cactttctga | 60  |
| ccaggagcta  | cttcgagttt | ggtgttacta | ggatcagggc  | cagtccttgg | cttatcaata | 120 |
| aatttttaac  | tctgttaate | ttacctgctt | taaaaaaaag  | ttcttgtgtg | ttcgtatctt | 180 |
| tattttattcc | ctagtttgca | gaactgtctg | aataaaaggat | acaaggatta | tttcaatggt | 240 |
| actgcactga  | aaaacgtgta | tgtattagtg | tgctagatta  | tttagcagaa | tattcacaag | 300 |
| ttctgttgga  | ccctgttgat | tgagcatgac | tactaaatat  | tatgtaataa | aaagcatttg | 360 |
| tcataaacagt | cttatgaagt | agttcttcga | atatagaaag  | ttctataatt | tagcccatga | 420 |

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aatgataggt ttttaatttt cagaaatgga gctgcatgta gaatgagatc acatgctttt 480
atatgtgaaa tattgggttt agcaattaac agaaggcata ttctgctaac tttatggc 538

```

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<210> 13
<211> 321
<212> DNA
<213> homo sapiens

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```
<400> 13
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ccctacaact ggttgcaaac tcaggctttc ccagtgacc aacaatttta attccaagag 60
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tctccacacc caggagaggt gtccctccag ccaaggcagg caggacactc tgcagctctc 180
cctcctgctc ccaggccctt gactacactc tcatctgcc a tctgagctaa gccaggaagg 240
cagttaaaaga aaggccccc aacatgaagc agggacaagg agacggacag gggtcagatg 300
acccattgat agggaagaga g

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<210> 14
<211> 347
<212> DNA
<213> homo sapiens

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```
<400> 14
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agacaaatct tctgcatgtc ggaggaaacgg gaattattct gatgaaaaga aagatgctat 60
gtattgggaa aaaaggcgga aaaataatga agctgccaaa agatctcgtg agaagcgtcg 120
actgaatgac ctgggttttag agaacaaact aattgcactg ggagaagaaa acgccacttt 180
aaaagctgag ctgctttcac taaaattaaa gtttggttta attagctcca cagcatatgc 240
tcaagagatt cagaaactca gtaattctac agctgtgtac tttcaagatt accagacttc 300
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tatttctgtc attaaacact ctccacaaag ctgctgttc gatgtttcag aagtgtcctc 420
agtagaacac acgcaggaga gctctgtgca gggaagctgc agaagtcctg aaaacaagtt 480
ccagattatc aagcaagagc cgatggaatt agagagctac acaagggagc caagagatga 540
ccgaggctct tacacagcgt ccatctatca aaactatatg gggaattctt tctctgggta 600
ctcacactct cccccactac tgcaagtcaa ccgatcctcc agcaactccc cgagaacgtc 660
ggaaaactgat gatggtgtgg taggaaagtc atctgatgga gaagacgagc aacaggtccc 720
caagggcccc atccattctc cagttgaact caagcatgtg catgcaactg tggttaaagt 780
tccagaagtg aattcctctg ccttgccaca caagctccgg atcaaagcca aagccatgca 840
gatcaaa

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<210> 15
<400> 15
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<210> 16
<211> 573
<212> DNA
<213> homo sapiens

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<400> 16
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ggaggctgct gggggcgggc cgtccagctc tgggccaggg ggtccaaagt gctcagcccc 60
cggggcacag caggacgttt gggggccttc tttcagcagg ggacagcccg attggggaca 120
atggcgctct ttggccacat cttgggtttc tgtgtgggtc tctcaccat ggccaaggca 180
gaaagtccaa aggaacacga ccggttcaact tacgactacc agtccctgca gatcggaggc 240
ctcgtcatcg ccgggatcct ctccatcctg ggcacacctc tcgtgctgag cagaagatgc 300
cggtgcaagt tcaaccagca gcagaggact ggggaacctg atgaagagga gggaaactttc 360
cgcagctcca tccgcgtct gtccaccgc aggcggtaga aacacctgga ccgatggaat 420
ccggccagga ctccctggc acctgacatc tcccacgctc cacctgcgcg cccacggggc 480
cctccgccc ccttccccc gccctgcccc cgcagactcc cctgcgcgc aagacttcca 540
ataaaacgtg cgttcctctc gacaaaaaaa aaa

```

<210> 17  
 <211> 486  
 <212> DNA  
 <213> homo sapiens

<400> 17

|              |             |              |            |            |            |     |
|--------------|-------------|--------------|------------|------------|------------|-----|
| gcgcgcacgggc | ttgctggggc  | tgggctctcttc | ctcgcggaag | tggggaggag | gcggctggcg | 50  |
| ttagtggacc   | gggaccggta  | gggggtgctgt  | tgccatcatg | gctgaccccg | acccccggta | 120 |
| ccctcgctcc   | tgcattgagg  | acgacttcaa   | ctatggcagc | agcgtggcct | ccgccaccgt | 180 |
| gcacatccga   | atggcctcttc | tgagaaaagt   | ctacagcatt | ctttctctgc | aggtctctct | 240 |
| aactacagtg   | acttcaacag  | ttttcttata   | ctttgagctt | gtacggacat | ttgtacatga | 300 |
| gagtcctggc   | ttaatcttgc  | tgtttgcccct  | cggatctctg | ggtttgattt | ttgcgttgac | 360 |
| tttaaacaga   | cataagtatc  | cccttaacct   | gtacctactt | tttgatttta | cgctgttgga | 420 |
| agctctgact   | gtggcagttg  | ttgttacttc   | tatgatgtat | atattatctg | caagctttca | 480 |
| tactga       |             |              |            |            |            | 486 |

<210> 18  
 <211> 662  
 <212> DNA  
 <213> homo sapiens

<400> 18

|            |             |            |            |            |            |     |
|------------|-------------|------------|------------|------------|------------|-----|
| cttttttctt | ctactccttc  | cccttcacac | ccccgtggct | ggaaggaacc | tccgcttccc | 50  |
| tgaaagcttg | gggggtcccac | ccctcttacc | ccaccggga  | ggaacgccc  | gggccccggg | 120 |
| cttggtttct | ctcttggttt  | ccctttgggc | agtttgatca | ctgatcgagt | aaggaatgac | 180 |
| ctttagattg | tgcgactttt  | gtttttgttt | ttttaaattt | ttttaaacca | agaatgattt | 240 |
| ctcttgcttc | cttctcctca  | ccatcttccc | agacggagtt | caaaggccac | ttctcaagca | 300 |
| gctttttggc | ccttcagcct  | cagagtggaa | tcttttaaag | acaggacccc | tatgtccagg | 360 |
| aaaggggaaa | aggaactttg  | ccaatgatag | tgaccacagc | aaaagcaata | aaataataaa | 420 |
| ataaaaaaca | atagcacagc  | ccttgttgag | gtcagcaggg | aggaggggct | gccccgagtt | 480 |
| gggtccttgc | ctggattttg  | acacagcaac | ttcctgtagt | gagcactttg | tatgaatcgt | 540 |
| ggacttcctg | ttctcaaggc  | gcaggtattt | attctgtatc | tgtctagagc | acacacccaa | 600 |
| atccaacctt | ctaataaaca  | tgatggcgca | gtcccaaaaa | aggaaacaga | agaagaaaag | 660 |
| gg         |             |            |            |            |            | 662 |

<210> 19  
 <211> 750  
 <212> DNA  
 <213> homo sapiens

<400> 19

|            |            |             |            |            |            |     |
|------------|------------|-------------|------------|------------|------------|-----|
| atagattttt | aggggaagga | gagaggggaag | ggtcagggtg | gagacacccc | tcccttgccc | 50  |
| ctttcctggg | cccagaagtt | ggggggaggg  | agggaagga  | tttttacatt | ttttaaactg | 120 |
| ctattttctg | aatggaacaa | gctggggccaa | ggggcccagg | ccctgtcctc | tgtccctcac | 180 |
| acccctttgc | tccgttcatt | cattcaaaaa  | aacatttctt | gagcaccttc | tgtgcccagc | 240 |
| atatgctagg | cccaccagct | aagtgtgtgt  | ggggggtctc | tacgccagct | catcagtgcc | 300 |
| tccttgccca | tccttcaccg | gtgcctttgg  | gggatctgta | ggaggtggga | ccttctgttg | 360 |
| ggtttgggga | tctccaggaa | gcccgaacaa  | gctgtcccc  | tccccgtg   | caacccatct | 420 |
| cctacagccc | cctgcctgat | ccccgtctgg  | ctgggggcag | ctcccaggat | atcctgcctt | 480 |
| ccaactgttt | ctgaagcccc | tcttcctaac  | atggcgattc | cggaggtcaa | ggccttgggc | 540 |
| tctccccagg | gtctaacgg  | taaggggacc  | cacataccag | tgccaagggg | gatgtcaagt | 600 |
| gggtgatgtc | ttgtgctccc | ctccccaga   | gcgggtgggc | ggggggtgaa | tatggttgcc | 660 |
| ctgcatcagg | tggccttccc | atttaagtgc  | cttctctgtg | actgagagcc | ctagtgtgat | 720 |
| gagaactaaa | gagaaagcca | gaccctctaaa |            |            |            | 750 |

<210> 20  
 <400> 20  
 000

<210> 21  
 <211> 1001

<212> DNA  
<213> homo sapiens

<400> 21

```
gggggagaga gggaggcctt tgggcggtgg gggccacggg gagggtggtc ctcgactac 60
gtgcgggaca ggaggtcagg gctggcaagt cctcaggcc cccctcggtg cccagcctc 120
gcgggcgccc taactgcccc gttccaaggg tggcacggg ccccgctgga gaggaacttc 180
tccgttggtt gatttcatca ccacccattc ccgattccac gtttccttta agcggggctg 240
gcgagcgca agggggcaag gaactggatt gcgattggtc agcacgtgcc tcggtcggcg 300
gtacaattgg ctgaggcgct gggccttggg aagcattccc cgacgggatt ggtcgtcgct 360
ctcgagagc cgcctccccg cagtacaagc ggccccggg tgggggggga ggaggggact 420
ccgggaggag gaacatggcg gtggcggacc tcgctctcat tcctgatgtg gacatcgact 480
ccgacggcgt cttcaagtat gtgctgatcc gactccactc ggctccccgc tccggggctc 540
cggctgcaga gagcaaggag atcgtgcgcg gctacaagtg ggctgagtag catcgcgaca 600
tctacgacaa agtgtcgggc gacatgcaga agcaaggctg cgactgtgag tgtctgggcg 660
gcgggcgcat ctcccaccag agtcaggaca agaagattca cgtgtacggc tattccatgg 720
cctatggtcc tgcccacgac gccatttcaa ctgagaaaat caaagccaag taccocgact 780
acgaggtcac ctgggctaac gacggctact gaggactccc agcccggggc ctgctgcctc 840
cagcagccac ttcagagccc ccgcctttgc ctgcactcct cttgcagggc tggccctgac 900
tgctcctgcg gcagcctctg gtgacgtgct gtccaccagg ccttgagagc aggctagcct 960
ggccacagaa ttaaacgtgt tgccacacct gccggcttct g 1001
```

<210> 22

<400> 22

000

<210> 23

<211> 580

<212> DNA

<213> homo sapiens

<400> 23

```
cgaaacgtgc gcaggcgccg gccgctgcgc tgcagatggc ggaaatggat ccggtagccg 60
agttccccca gcctcccggg gctgcgcgct gggctgaggc ccttctgcga tgttttacct 120
ggctgcggct gtgtcagatt tctatgttcc tgtctctgaa atgcctgaac acaagatcca 180
gtcatctggg ggcccactgc agataacaat gaagatgggt ccaaaactgc tttctccttt 240
ggttaaagat tgggctccca aagcatttat aatttccttt aagtggaga ctgacccgc 300
cattgtaatt aatcgagctc ggaaggcttt ggaaatttat cagcatcaag tgggtggtggc 360
taatatcctt gagtacgac agtcctttgt gtttattgta accaaagact cggaaaccaa 420
gttattgcta tcagaggaag aaatagaaaa aggcgtagag atagaagaga agatagtgga 480
taatcttcag tctgacaca cagcttttat aggtgacaga aactgaagta aaaagccctt 540
ataggatcaa aaattgttca gggctcttag agatggtgaa 580
```

<210> 24

<211> 740

<212> DNA

<213> homo sapiens

<400> 24

```
ggatgcgtgg cggggagcgc cgggctctcc cggaagtctc cctggacgga agtggaaacg 60
gaaacctttt tagggagtcc aagggtacagt cgccgcgtgc ggagttgtta ctggttactt 120
ggcctcatgg cggcccgagc ttcggttcgag aacaactgtg agatcggtc ctttgcgaag 180
ctcaccaaca cctactgtct ggtagcgatc ggaggctcag agaacttcta cagtgtgttc 240
gagggcgagc tctccgatac catccccgtg gtgcacgcgt ctatcgccg ctgccgcac 300
atcgggcgca tgttgtggg gaacaggcac ggtctcctgg taccacaaca taccaccgac 360
caggagctgc aacacattcg caacagcctc ccagacacag tgcagattag gcgggtggag 420
gagcggctct cagccttggg caatgtcacc acctgcaatg actacgtggc cttggtccac 480
ccagacttgg acagggagac agaagaaatt ctggcagatg tgctcaagg ggaagtcttc 540
agacagacag tggccgacca ggtgctagta ggaagctact gtgtcttcag caatcagga 600
gggctgggtc atcccaagac ttcaattgaa gaccaggatg agtgtctctc ttttcaagtc 660
ccttggtgag gggatgtgaa cgaagcatta agtgattctt gggatgtgta taatgtgtcc 720
ttcgtgcccg aaaccaccag 740
```

<210> 25  
 <400> 25  
 000

<210> 26  
 <211> 275  
 <212> DNA  
 <213> homo sapiens

<400> 26

|             |            |             |             |            |             |     |
|-------------|------------|-------------|-------------|------------|-------------|-----|
| atggggctaca | acctgagccc | ccagttcacc  | cagcttctgg  | tctcccgcta | ctgcccacgc  | 60  |
| tctgccaatc  | ctgccatgca | gcttgaccgc  | ttcatccagg  | tgtgcaccca | gctgcagggtg | 120 |
| ctgacagagg  | ccttccggga | gaaggacaca  | gctgtacaag  | gcaacatccg | gctcagcttc  | 180 |
| gaggacttcg  | tcaccatgac | agcttctcgg  | atgctatgac  | ccaaccatct | gtggagagtg  | 240 |
| gagtgcacca  | gggacctttc | ctggcttctt  | agagtgcagag | aagtatgtgg | acatctcttc  | 300 |
| ttttcctgtc  | cctctagaag | aacattctcc  | cttgcttgat  | gcaacactgt | tccaaaagag  | 360 |
| ggtggagagt  | cctgcatcat | agccaccaa   | tagtgaggac  | cggggctgag | gccacacaga  | 420 |
| taggggcctg  | atggaggaga | ggatagaagt  | tgaatgtcct  | gatggccatg | agcagttgag  | 480 |
| tggcacagcc  | tggcaccagg | agcaggtcct  | tgtaatggag  | ttagtgtcca | gtcagctgag  | 540 |
| ctccaccctg  | atgccagtgg | tgagtgttca  | tgggctgtt   | accgttagta | cctgtgttcc  | 600 |
| ctcaccaggc  | catcctgtca | aacgagccca  | ttttctccaa  | agtggaatct | gaccaagcat  | 660 |
| gagagagatc  | tgtctatggg | accagtggct  | tggattctgc  | cacacccata | aatccttgtg  | 720 |
| tggttaacttc | tagctgcctg | gggtctggccc | tgctcagaca  | aatctgctcc | ctgggcatct  | 780 |
| ttggccaggc  | ttctgccttc | tcagctggg   | acctctcact  | tgctgccc   | gctctgctcg  | 840 |
| gcttcagtc   | ccaggagaca | gtggtcacct  | ctccctgcca  | atactttttt | taatttgc    | 900 |
| tttttttcat  | ttggggccaa | aagtccagt   | aaattgtaag  | cttcaataaa | aggatgaaac  | 960 |
| tctggaaaaa  | aaaaa      |             |             |            |             | 975 |

<210> 27  
 <211> 854  
 <212> DNA  
 <213> homo sapiens

<400> 27

|             |             |            |             |            |             |     |
|-------------|-------------|------------|-------------|------------|-------------|-----|
| gaacacacac  | acaggtgttc  | tgaccagctc | aggcttgcca  | cagtgcagca | ctctgtgggt  | 60  |
| agcaaaagag  | aagtttattt  | gtgcccagcc | attgggtcacc | ttgggtgatg | caccagatag  | 120 |
| caggcagatg  | ttgggttcatt | ggccttcgtc | ctcttctctc  | ctaaaataat | attggcttta  | 180 |
| ccatcttaac  | tcagctgtgg  | gttttttgtg | ggttcttgtt  | tgttttttgg | catgaattgt  | 240 |
| catcttttgt  | gtttttttta  | ccccagccc  | ctcaaaaaaa  | taaggcctcc | aggtatcaag  | 300 |
| atctcatatt  | aggattttct  | gtccttaatt | ttttgagcaa  | aatctggaaa | atgtgaaagc  | 360 |
| atattttagat | tttatatact  | atctgaaatg | tgatttgtta  | agattcttaa | atttgggcct  | 420 |
| cttagaataa  | ttttgaatga  | gatctaccga | ctcacttgtg  | agaatatatt | tcacagatta  | 480 |
| tctttggggc  | ttttcattag  | aaagctgttt | gtttgtcccc  | ctgttggtac | atttgggttac | 540 |
| ctcatttttg  | cgtttcagat  | tgtgaaagct | cacaggggtg  | ttttttggaa | tcatttgctg  | 600 |
| agtcattttc  | tcaaatcata  | ttccattgta | tcagttaaca  | tatagtttta | aatgtatgta  | 660 |
| ttataaatat  | ctgtaaccaa  | atcatttgaa | ggcttgataa  | atttttaaca | aagtttgtac  | 720 |
| attttttatg  | aaagttacta  | gtaatgcttt | actaagtagt  | gcaatgaatt | tttattttta  | 780 |
| atccctgtgc  | ccaatttttg  | agttgagagg | gttggttggt  | ataaatgtat | gatgtacact  | 840 |
| taaaaaaaaa  | aaaaa       |            |             |            |             | 854 |

<210> 28  
 <211> 802  
 <212> DNA  
 <213> homo sapiens

<400> 28

|            |            |            |            |             |             |     |
|------------|------------|------------|------------|-------------|-------------|-----|
| tttttttcag | agtgcctagg | ctttattaca | aatggagttg | actgctagag  | aggcccttct  | 60  |
| ccaatctttc | ttctgtacct | tcttccctcc | caaagacatc | cctctagggg  | aggctcagtag | 120 |
| gccattaggt | aggaggaaat | ctggagagtg | aaaagggggc | ttgcttttgt  | caaagtcctc  | 180 |
| tgaaacaacc | actgagtcct | aaggctggct | ccagttgaga | atctctctagt | ggaagaggtt  | 240 |
| tagctctcat | cttcaaggct | cttcatttct | acatcctggg | gggcttttgt  | cttctcttgc  | 300 |



|             |             |             |             |             |             |     |
|-------------|-------------|-------------|-------------|-------------|-------------|-----|
| ctttttgagct | gtgggttoact | agtctctggct | ggcttttgaag | gggctttccac | ttccatggct  | 360 |
| gtttttctctt | cttggggcaag | ccggatcttgc | tggaggagtt  | ttctgcgctt  | cttccctgac  | 420 |
| agtgtaatgt  | tggcacgtgc  | actggacgcc  | cgcttcttga  | gggtggtgccg | cgtgatcagc  | 480 |
| cccttggtcta | ccacagcccc  | gaccaccccg  | tgcctcagac  | gccgctcccc  | attcaacacc  | 540 |
| cgccggcgct  | tgaacagctt  | cttctctcagc | tccgttcggg  | gccgggttgat | ctttcccccc  | 600 |
| ggagctcccc  | tactcgcgat  | tccactccag  | ttcacggctc  | gtacttccgc  | tcagcgccgg  | 660 |
| atccgcgggc  | cccgccccgg  | ccctcccgcg  | gccaatcgca  | actcgggggc  | gggtccctcgg | 720 |
| gctatataaa  | ggagctccgc  | ggtgcgggag  | gccttttcgga | gggtggtgag  | ctagtaagtg  | 780 |
| tggtttttagc | tgtagtagcc  | ag          |             |             |             | 802 |

&lt;210&gt; 29

&lt;211&gt; 307

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 29

|            |             |             |             |            |            |     |
|------------|-------------|-------------|-------------|------------|------------|-----|
| ccccgtccgc | gcgtgggtggc | tgcctgctgtg | catgtccctg  | cgatgggagt | cttgtgcccc | 60  |
| gcctgtcagt | ttctccccc   | gggcagagct  | ccccttccctg | caagagtctg | ggaggcggtg | 120 |
| caggctgtcc | tggctgctct  | ggggaagccg  | agggacagcc  | ataacacccc | cgggacagta | 180 |
| ggctctggcg | gcaccactgg  | gaactctgga  | cttgagtgtg  | tttgccctct | ccctgggtat | 240 |
| gaatgtgtga | gttcaccccag | aggcctgctc  | tcctcacaca  | ttgtgtggtt | gggggttaac | 300 |
| gatggaggga | gacacctcct  | catagacggc  | aggtgcccc   | ctttcaggga | gtctcccagc | 360 |
| atgggcggat | gccgggcatg  | agctgctgta  | aactatttgt  | ggctgtgctg | cttgagtgc  | 420 |
| gtctctgtcg | tgtgggtgcc  | aagtgtctgt  | gtagaaaactg | tgttctgagc | ccccttttct | 480 |
| ggacaccaac | tgtgtccctgt | gaatgtatcg  | ctactgtgag  | ctgttcccg  | ctagccaggg | 540 |
| ccatgtctta | ggtgcagctg  | tgccacgggt  | cagctgagcc  | acagtcccag | aaccaagctc | 600 |
| tcgggtgtct | gggcccaccat | ccgcccacct  | cgggctgacc  | ccacctctc  | catggacagt | 660 |
| gtgagccccc | ggcgtgcat   | cctgctcagt  | gtggcgtcag  | tgtcggggct | gagcccttgg | 720 |
| agctgcttca | gtgaatgtac  | agtgcgccgg  | acgagctgaa  | cctcatgtgt | tccactcccc | 780 |
| ataaaagggt | gacaggga    | aaaaaaaa    |             |            |            | 807 |

&lt;210&gt; 30

&lt;211&gt; 777

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 30

|             |            |            |            |            |            |     |
|-------------|------------|------------|------------|------------|------------|-----|
| ctctctgcc   | gctgatgtgc | cctgttgccc | cccaccccat | cccgcacaga | accatccctg | 60  |
| cattccacag  | gggactcggg | caagggtgcc | gaagatagac | aagaggcaca | cagagacaga | 120 |
| ccaactggca  | gccaggcagc | cccagaggag | agagacattc | agacagagg  | aagtcctcct | 180 |
| gcccctcatt  | ccttccaaga | tgagaaaaac | ttgccgccac | ccccgcacac | tgatgccagg | 240 |
| gaggtgggag  | gaagaagtgg | gaaatttccc | ttcccagtac | ccccaaagaa | gtctgagcct | 300 |
| tcaatgttga  | attttttctt | tattaaaatt | acttttatct | tataaaatca | actaatcaaa | 360 |
| aatgatatag  | acgacagcac | tggctctgtg | aaggtggcat | ctttctgggc | aggcaggcca | 420 |
| tggggcatgg  | aggagggtgc | aaagatatgg | gttgcctgtc | tctggcctcc | agctgcattg | 480 |
| aggccggccc  | agggtctagg | gtgtgcactg | ggcaagggca | gggcggcagg | tgccaggccg | 540 |
| gcttggaaca  | tgaaaccctg | acctgtctgc | attccttttg | cttccaccac | cactagcttc | 600 |
| tttggaatct  | tgggggtggg | gtcatctttg | gggattatgg | ctgccaccgc | ggattttgag | 660 |
| gtaggagagtg | tgggagcagc | cttggcagat | ggggcacccg | tgcctgcag  | gtgttgacaa | 720 |
| gatccgccat  | ctgtaatgtc | cttggcacaa | taaaacccaa | tgtcagtttc | aaaaaaa    | 777 |

&lt;210&gt; 31

&lt;211&gt; 501

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 31

|            |            |            |             |            |            |     |
|------------|------------|------------|-------------|------------|------------|-----|
| ccggattccg | ccccgcccgc | tgcgatccgg | ttccgctccc  | cacaacccgc | totgtggcgg | 60  |
| ggcttccggg | cgggagggtc | cgccagctct | cgcgtccctt  | gctgggtcca | gacaccgggt | 120 |
| ccgttgcaaa | cattttttaa | gggtgggtta | ttcttccctga | aatgagtttg | gtgattagaa | 180 |

```

atctgcagcg agtcattcccc atcaggagag cgccacttcg cagtaagatc gagattgtaa 240
ggaggattttt aggagtgcag aaattttgacc tggggatcat ctgtgttgac aacaagaata 300
ttcagcacat taatagaatc tacagagata gaaatgtccc aaccgatgtg ctttcttttt 360
catttcattga gcattctgaaa gcaggatgaat ttccccagcc tgattttcca gatgactaca 420
atctgggaga catttttcta ggagtggagt atatcttcca tcagtgtaga gaagatgaag 480
attacaattga cgtcttgact g

```

501

```

<210> 32
<211> 1104
<212> DNA
<213> homo sapiens

```

```

<400> 32

```

```

atcttgaccc taaacttttg gaaggaaaag taaaggagga tcttgaccag ggggaatcca 60
tgaaacctttt aaccttttgca aggttctact tgccaattct gggtcccagc gcaaagaagg 120
ccatacacat ggatgatgat gtaattgtgc aagggtgatat tcttgccctt tacaatacag 180
cactgaagcc aggacatgca gctgcatttt cagaagattg tgattcagcc tctactaaag 240
ttgtcatccg tggagcagga aaccagtaca attacattgg ctatcttgac tataaaaaagg 300
aaagaattcg taagcttttc atgaaagcca gcacttgctc atttaatcct ggagtttttg 360
ttgcaaacctt gacggaatgg aaacgacaga atataactaa ccaactggaa aaatggatga 420
aactcaatgt agaagaggga ctgtatagca gaaccttggtc tggtagcatc acaacacctc 480
ctctgcttat cgtattttat caacagcact ctaccatcga tccatgtggg aatgtccgcc 540
accttgggttc cagtgtctga aaacgatatt cacctcagtt tgtaaaggct gccaaagtac 600
tccattggaa tggacatttg aagccatggg gaaggactgc ttcataact gatgtttggg 660
aaaaatggta tattccagac ccaacaggga aattcaacct aatccgaaga tataccgaga 720
tctcaaacat aaagtgaac agaatctgaa ctgtaaagca gcatttctca ggaagtctctg 780
gaagatagca tgcgtgggaa gtaacagttg ctaggcttca atgcctatcg gtagcaagcc 840
atggaaaaag atgtgtcagc taggtaaaga tgacaaactg ccctgtctgg cagtcagctt 900
cccagacaga ctatagacta taaatatgtc tccatctgcc ttaccaagtg ttttcttact 960
acaatgctga atgactggaa agaagaactg atatggctag ttcagctagc tggtagagat 1020
aattcaaac tgctgttggg ttttaatttg taacctgtgg cctgatctgt aaataaaact 1080
tacatttttc aaaaaaaaaa aaaa

```

1104

```

<210> 33
<211> 810
<212> DNA
<213> homo sapiens

```

```

<400> 33

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ggggggtagt gaacogtgca ggataatgaa agcaacttgc tttggaaatg acctaccgct 180
acctggtgtc tgagactgag attatctcag actgtcttct ggcttctgcc aaaacactcc 240
cttaacagaa agcaccgagg ggatgggggt aggggggttg gggagagtga ggcttgagt 300
tgaaggaaat ctcatatatg cagagctgaa atctccctct ttgtatgtcc acacttttgt 360
cttgttctct agactgattc ttgctattcc aaatcctctt ccacgttgac agcccttcag 420
atatttcaac actcctctca gcacccctca ctctccaagc tgaacttggt 480
tcacagggtg ggatttgtga tgtgcatgca ggagggtggg gtggacagtg ccctgggctg 540
gaatccccct tagttctaaag tgcctccttg cccgcagctt cgagagctgt gcccaggagt 600
gaacaaccag ccctacctct gtgagagtgg tcaactgtgc ggggagactg gctgctgcac 660
ctactactat gagctctggg ggttctgggt gctctggact gtcctcatcc tcttttagct 720
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```

810

```

<210> 34
<400> 34
000

```

```

<210> 35
<211> 826
<212> DNA
<213> homo sapiens

```

&lt;400&gt; 35

|             |             |            |            |            |             |     |
|-------------|-------------|------------|------------|------------|-------------|-----|
| tggaaatcat  | ggcaactaca  | caggatgttg | cttaccagga | gggagttttg | gtatcttagt  | 60  |
| actgaagtta  | gcactatgtt  | tacatgcaaa | agattaagga | aaaaaccctt | aaagtggaca  | 120 |
| ggatccaaa   | gttcactttc  | tgtgactcat | caaagtga   | aaagacttgt | aaccaactttg | 180 |
| cctggacttt  | ttccatttta  | caacagtcca | cccattcaca | atgattttgt | tctctgctcc  | 240 |
| atatttttta  | atcccttaag  | catttgatga | aacactcttt | agtgcctata | gcattttctt  | 300 |
| acttttgtta  | aaaaatgtgac | aattgtcaaa | aaatgcacta | aaatgtaaat | ggagattgaa  | 360 |
| caagttcact  | ttccagctta  | taggcaactt | tatacagact | tgaacatttt | ctccagttgt  | 420 |
| ttagtaaaag  | tgaagagaa   | aggggttttt | ctgccacagg | atataacctt | tttttatata  | 480 |
| acaagcataa  | cacaccactg  | cttttggtgg | aaaagtgcag | aatagtatgt | accttttatg  | 540 |
| aagaaaaatg  | taattttaca  | tattcagtga | gaatgttact | gctgattttt | ttttccaagg  | 600 |
| tgtagaatat  | tttttgattt  | atagaattca | tttttgacct | agatgatggg | tcctttacag  | 660 |
| aacaataaaa  | tggctgaaca  | ttttcacaaa | tagagtgtaa | cgaagtctgg | atttctgata  | 720 |
| ccttgctcatt | tgggggattt  | tattttactt | tgttgcttta | aaattcaatg | cagagaagtt  | 780 |
| gttgactgta  | ggggaaataa  | agttaattca | aattttgaaa | aaaaaa     |             | 826 |

&lt;210&gt; 36

&lt;211&gt; 579

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 36

|             |            |            |            |            |             |     |
|-------------|------------|------------|------------|------------|-------------|-----|
| gttcttaact  | gttccatttt | ccgtatctgc | ttcgggcttc | cacctcattt | ttttcgcttc  | 60  |
| gcccattctg  | tttcagccag | tgcgcaagaa | tcatgaaagt | cgccagtggc | agcaccgcca  | 120 |
| ccgccgccgc  | gggccccagc | tgcgcgtga  | aggccggcaa | gacagcgagc | ggcgcgggcg  | 180 |
| aggtgggtgcg | ctgtctgtct | gagcagagcg | tggccatctc | gcgctgcgcc | gggggcccgcg | 240 |
| gggcgcgccct | gcctgccctg | ctggacgagc | agcaggtaaa | cgtgctgctc | tacgacatga  | 300 |
| acggctgtta  | ctcacgcctc | aaggagctgg | tgccaccctt | gccccagAAC | cgcaagggtga | 360 |
| gcaagggtgga | gattctccag | cacgtcatcg | actacatcag | ggaccttcag | ttggagctga  | 420 |
| actcggaaatc | cgaagttgga | acccccgggg | gccgagggct | gccggtccgg | gctccgctca  | 480 |
| gcaccctcaa  | cggcgagatc | agcgccctga | cggccgaggc | ggcatgcgtt | cctgcggacg  | 540 |
| atcgcatctt  | gtgtcgctga | aggcctcccc | cagggacc   |            |             | 578 |

&lt;210&gt; 37

&lt;211&gt; 799

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 37

|             |             |             |             |            |             |     |
|-------------|-------------|-------------|-------------|------------|-------------|-----|
| agcttttgtt  | cacactttta  | atagcagtc   | cagaatgatt  | tcactacaga | ctctctggaa  | 60  |
| agcctgggag  | ctgaattccg  | gaagatcccc  | acatcgatga  | aagcaaagcg | aagcaccaag  | 120 |
| ccatcatcat  | gtccacgtcg  | ctacgagtca  | gcccattccat | ccatggctac | cacttcgaca  | 180 |
| cagcctctcg  | taagaaaagcc | gtgggcaaca  | tctttgaaaa  | cacagaccaa | gaatcactag  | 240 |
| aaaggctctt  | cagaaactct  | ggagacaaga  | aagcagagga  | gagagccaag | atcatttttg  | 300 |
| ccatagatca  | agatgtggag  | gagaaaacgc  | gtgccctgat  | ggccttgaag | aagaggacaa  | 360 |
| aagacaagct  | tttccagttt  | ctgaaaactgc | ggaaatatct  | catcaaagtt | cactgaagag  | 420 |
| aagaggatgg  | ataaggacgt  | tatccaagaa  | tggacattca  | aagaccaagt | gagtttgtga  | 480 |
| gatttctaaca | gatgcagcat  | tttgctgcta  | ccttacaagc  | ttctcttctg | tcaggactcc  | 540 |
| agaggctgga  | aagggaccgg  | gactggaaag  | ggaccaggac  | tgaacagact | ggttacaaaag | 600 |
| actccaaaaca | atctcatgcc  | ctgtgctgtt  | acagaggaga  | acaaaatgct | ttcagcaagg  | 660 |
| atctgaaaac  | tcttccgtcc  | ctgcaggaaa  | ggattgacgc  | tgatagaaga | gcctggacag  | 720 |
| atgtaattgag | aactaaagaa  | aacgatggct  | ggagatgaca  | tttatccagg | gtcactttgt  | 780 |
| caggccctag  | gacttaaat   |             |             |            |             | 799 |

&lt;210&gt; 38

&lt;400&gt; 33

000

&lt;210&gt; 39

&lt;211&gt; 1743

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 39

```

aatttatttt tttttcatgg tctgtcaggt tttatttata gagtctgggtg aacttgaact 60
agagaaaagct gcaaaaagtg gtttggagag catggcaggg ccatggagaa gggctaatag 120
aagcaggtcc cttgcccaga ccttcagggg gcccttttgg tggatagcgg acacctgagg 180
caggaggtgg cagggggccaa gtccaggcag gcagcagcag ggctgcaact gagagctgag 240
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actcgcccca tgaagacagg gaacttgtgc tgctggctcc agagcacgaa gaggaagggc 360
tgctgcactt caaagaccag cagggtgcgg gccacagaga tggcggaggc tgcagccgcc 420
tccaccccag tctctgtcag ttccagcact gtctggtgct gcctgcgaga aacctgaaga 480
tctgggtcct ctgtcagccc acacagggtta aggtcataag aaaaatcgaa gaattccaat 540
ttctccatga ttgagagcat atcctggctg gtctgcactt tgatgcgggg tagtgttagg 600
agagtgggct ggaacttgga catctccagt ttctccatga tggccttgaa aacagaaggc 660
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aaactccagat tgtgggagag ctgcagctgc cccaccttgg ctttcaaagt ttggtcaatg 780
aaatggggca cagggtactt cttgctattc atcatgggca cttttataac tgagtttttg 840
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tggaattggc ccctgccacc tctgcctca ggtgtccgct atccaccaa agggctccct 1680
gagggtctgg ggcaagggac cgtgcttcta attagccct tcttccaatg ggccttgc 1740
ggc

```

1743

&lt;210&gt; 40

&lt;400&gt; 40

000

&lt;210&gt; 41

&lt;211&gt; 1183

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 41

```

gccaatcgaa tcttctctgg aggccttttca cagggcgggg cctgtccct ctacacggcc 60
ctcacctgcc cccacctctt ggctggcact gtggcggtga gctgctggct gcctctgcac 120
cgggccttcc cccaggcagc taatggcagt gccaaaggacc tggccatact ccagtccat 180
ggggagctgg accccatggt gcccgtagcg tttggggccc tgacggctga gaagctccgg 240
tctgttgtca cacctgccag ggtccagttc aagacatacc cgggtgtcat gcacagctcc 300
tgtcctcagg agatggcagc tgtgaaggaa tttcttgaga agctgctgcc tctgtctaa 360
ctagtgcctg gccccagtc agtaccocag ctcactgggg actcagcaag caagcgtggc 420
accatcttgg atctgagccg gtcgagcccc tgtccccacc ctctctgacc tgtccttttc 480
ccacaggcct ctgggggagc gtggcaaggc ctggccgggc ctctcttctt ggccttagcc 540
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ccccctggca gcagtattgg aggggctaca ggcagctgga gaaaggggcc cagcgcgtga 660
ccactcact caggacctca cctactagcc ccgcttggg cccctcctg tgacctcagg 720
gtttggccca tggggccctc ccaggccctt gccccaactg attctgccc gataatcgtg 780
tctcctgcc tccactcagc gcttctcagt catgaatgtg gccatggccc cggggtcccc 840
tgctgtctgt gggctccctg tccctggggc ggagtgtctg tgaggagggt gagccttttg 900
aggggggctt tccctcagct gtttccccac actggggggc tgggcccctg cttcccgtta 960
ccctccttcc ctgcaggcct ggagcctgta gggctggact gaggttcagg tctcccccca 1020
gctgtctcac cccactttg tccccactct agagcaggga ggcagtgagg gaggagtgt 1080
gtctcgtctt ctgtctccat gtggtttttg ggtgtttttc ttgtgtgtc ctggattccg 1140
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1183

<210> 42  
 <211> 768  
 <212> DNA  
 <213> homo sapiens

<400> 42

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|-------------|-------------|-------------|-------------|-------------|------------|-----|
| gttttttttt  | ttactgcaga  | aaattgggtgg | tatttttcaca | ttcatagtgt  | ttctatccaa | 60  |
| tttcagtacc  | cacattttaat | gaggaaaaaa  | tgtttttacca | atgaaggagg  | aattctttaa | 120 |
| ttagctgtaa  | tgtaggttg   | gagaaaaatt  | ggtagtttagg | gtattttcaa  | ggtaccatca | 180 |
| aatcagat    | ctgttttttt  | gttaaaaaaa  | attttttttaa | tcagtattgt  | ttttacaagt | 240 |
| aatatacttt  | gaaacctcttg | aactaatagt  | ctcaaaaact  | ctagaggaca  | gtctgagaac | 300 |
| acgtatttct  | attgttcttaa | ataaatatcat | gttttttgaat | agttcaatca  | tgaattattg | 360 |
| actatgtctt  | catcaaaaagt | gttaatccct  | ctcagggtct  | ctgggtgaaga | ccttcaagag | 420 |
| tttgggtttt  | tctcccagga  | aattggaagg  | tagaattgta  | aattcataga  | acttctttta | 480 |
| taatgggtgta | cctcagcagc  | tgcttttcaa  | tttatgccaa  | gtctttacag  | agtttatact | 540 |
| tgaatagtaa  | atatgtcttc  | tgagttttac  | agtgtcttaa  | actcaatgca  | catttttttt | 600 |
| tcttcttttt  | ccacccttct  | ttgtttgtag  | ttcattatcat | ctgtcttatt  | acagaactga | 660 |
| tttcccttct  | ggctgtacat  | gttgggggtgc | tggatttttt  | tccgtgtctt  | tagtcttcgg | 720 |
| atacatgttc  | tcttcttttag | cttgtgggtga | atacagtaat  | ttgcattg    |            | 768 |

<210> 43  
 <211> 1029  
 <212> DNA  
 <213> homo sapiens

<400> 43

|             |             |             |             |             |             |      |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ccctgctgtg  | aagtccctggc | aggtgttgggt | aatgtgtgga  | aatgcagtca  | gcaagtttgc  | 60   |
| tggggagttt  | gataaaagta  | taaaaacaaaa | caaaaaaagc  | ctcgggtataa | ttttgtttcca | 120  |
| cgacttcttc  | tgtagcttta  | caccagaagg  | aaggaatggg  | ctacagcagg  | tagtggagga  | 180  |
| agaggggggt  | gagcaggtgt  | attaaaaatag | cttacgggtg  | aggcctaaaa  | ggtcacccct  | 240  |
| cggccccctc  | tccaaaagaa  | gggcatgggc  | acccccagga  | gaggatggcc  | ccaaaaacct  | 300  |
| tatttttata  | catgagagta  | aataaacata  | ttttttttac  | aaaaataact  | tctgaattta  | 360  |
| tcagtgtttt  | gccgttaaaa  | atattctctt  | atagtaaaatt | atattattgga | agatgacttt  | 420  |
| tttaaaagctg | ccgtttgcct  | tggctttgggt | tcatacactg  | atattatttt  | ctatgccagg  | 480  |
| cagtagagtc  | tctctgcctc  | tgaggagcag  | gctacccgca  | tcccactcag  | ccccctccta  | 540  |
| cccctcaaga  | tttgatgaaa  | attccaacca  | tgaggatggg  | tgcatcgggg  | aagggtgaga  | 600  |
| aggagagcct  | gcctgctcag  | ggatccaggc  | tcgtagagtc  | actccctgcc  | cgtctcccag  | 660  |
| agatgcttca  | ccagcacctg  | cctctgagac  | ctcgtctctt  | gttccagcaa  | ccctgggttg  | 720  |
| ggggtcagac  | ttgatacact  | ttcagggttg  | gagtgggacc  | accccagggc  | ctgctgagga  | 780  |
| cagagcagcc  | aggccgtcct  | ggctcacttt  | gcagttggca  | ctgggttggg  | gaggaagaga  | 840  |
| gctgatgagt  | gtggcttccc  | tgagctgggg  | tttccctgct  | tgtccagttg  | tgagctgtcc  | 900  |
| tcggtgttac  | cgaggctgtg  | cctagagagt  | ggagattttt  | gatgaaaggt  | gtgctcgctc  | 960  |
| tctgcgttct  | atcttctctc  | tctccttgt   | tcttcgcaaac | cacaagataa  | aggtagtgggt | 1020 |
| gtgtctcga   |             |             |             |             |             | 1029 |

<210> 44  
 <211> 736  
 <212> DNA  
 <213> homo sapiens

<400> 44

|             |            |             |              |             |            |     |
|-------------|------------|-------------|--------------|-------------|------------|-----|
| attcctgggt  | tgaaatattt | tgtagggatt  | gcttattata   | ttatttttagc | tgatgaacct | 60  |
| caggacaacg  | gctacagaca | cacacatata  | tacacgcaca   | caaaatctca  | gctgttgaag | 120 |
| agtgggcttg  | gaatcagact | tctgtgtcca  | gtaaaaaaact  | cctgcactga  | agtcattgtg | 180 |
| acttgagtag  | ttacagactg | attccagtga  | acttgatcta   | atctcttttg  | atctaataa  | 240 |
| tgtgtctgct  | tacottgttt | cctttttaatt | gataagctcc   | aagttagttg  | taattttttg | 300 |
| acaactttta  | atgagcttca | ttcaactttt  | ttcaactaatg  | tttcaagtat  | agtaccaata | 360 |
| atttcaactaa | cctgttctca | agtgggttag  | ctaccattct   | gccattttta  | attttttatt | 420 |
| aatttttatt  | gcttgagcac | actgatcaac  | cactgaactg   | ccttctttcca | ttgtcctgca | 480 |
| atgatataag  | gggtacattt | ttgtgtatat  | ggcttttccata | gttgggattt  | cagagcactg | 540 |

```

ataccagata ttttcagttt gttttctggg ggaattttcat ttgcatttat gtttttagct 500
atctgtgata actttgtttaaa tatttttttggc atatttttggc totatttggaa tttttgtata 560
ctcgcaacta tttttctgtt aacagcttcca gtttttttata aaacactgaa agtttttatt 720
ttgcagtgga aaaaaa 736

```

<210> 45  
 <400> 45  
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<210> 46  
 <211> 1159  
 <212> DNA  
 <213> homo sapiens

<400> 46

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caaggtggcc agcgacacac agttctaccc tggcctcggg ctggccttgg ccttccacga 120
cggcagcgtc cacatcgtgc accggctctc actgcagacc atggcctgtc tctacagctc 180
cgcgcccccg aggcctgtgg atgagccggc catgaagcg ccccgccacc cgggcccccg 240
cgtccactta aaggctatgc agctatcgtg gacgtcactg gccctggttg ggattgacag 300
ccacgggaag ctgagcgtgc tccgctcttc accctccatg ggccaccgc tggaggtggg 360
gctggcgtg cggcacctgc tcttctgtgt ggagtactgc atggtgaccg gctacgactg 420
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cgaggagtac acgcgccaga ccgctgcccc gcagcaggtc ctctccaccg ggatcctggc 540
catgaaggcc tggctctgca agctgtcgcc ctgcacgggt acccgcggtg gcgactacca 600
caccaagctc ttcctcatcg ccatcagctc caccctgaag tggctgtgct gccccacctt 660
tctcaacacg cctgacaaga gccccggcga ccggctgacc gagatctgca ccaagatcac 720
cgacgtcgac attgacaagg tcatgatcaa cctcaagacg gaggaatttg tggctggacat 780
gaacacactg cagggcgctg cagcagctct tgcagtgggt gggcgacttc gtgctgtacc 840
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gcctggactg gctgcccagc 1159

```

<210> 47  
 <211> 690  
 <212> DNA  
 <213> homo sapiens

<400> 47

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ttgcttttgt ttttatacag aatataaaga tttccctcat taatcttcca tgtgaagggt 180
attacaagcc tggaggaaga tactttctgc acacaagtat gtatcttatg tgtgcagtat 240
tggaaccaa tgggtgtagt ctctacaca taaatgggg caagtgcac cacaattaa 300
aagggggaaa gagaaatatt ctagttaatc agatgcaaga agcaaacaa acgcaaaaac 360
tgtgcaata agaccaagcc agtaacttta gttacgacac tgcagattac actggaataa 420
caggttttgt aggcctatagt gtgcaccaca ttaaaacagc aagaaagagc tttttatata 480
gaaaggctgg aatgagggat ttttactaaa gcaaattaac ttcttgtaa ctgcaaaaac 540
aaaacaaaac tgagcatatg agtgcttagt tactgaaggc atgttatacc agtttctgtg 600
cagcatgcta aaagcttaga cttcttcaat ggtgcttacc aatcattaat agtcacgttt 660
ttgccccctt ttgcaaaatt tggaggcatg 690

```

<210> 48  
 <400> 48  
 000

<210> 49  
 <400> 49  
 000

<210> 50  
 <400> 50  
 000

<210> 51  
 <211> 1186  
 <212> DNA  
 <213> homo sapiens

<400> 51

```

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tggaccctgt acgtaccaaa caggtgaact tgggtccatct ttccttcttc ctttttttgc 180
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<210> 52  
 <211> 1029  
 <212> DNA  
 <213> homo sapiens

<400> 52

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cacattcccc cggtccttca gactgcccgg agagcgcgct ctgcctgccg cctgcctgcc 180
tgccactgag ggttcccagc accatgaggg cctggatctt ctttctcctt tgccctggcg 240
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gagaatttga tgatggtgca gaggaaaccg aagaggaggt ggtggcggaa aatccctgcc 420
agaaccacca ctgcaaacac ggcaaggtgt gcgagctgga tgagaacaac acccccatgt 480
gcgtgtgcca ggaccccacc agctgcccag ccccatagg cgagtttgag aaggtgtgca 540
gcaatgacaa caagaccttc gactcttctt gccacttctt tgccacaaag tgcaccctgg 600
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<210> 53  
 <211> 985  
 <212> DNA  
 <213> homo sapiens

&lt;400&gt; 53

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tgtccatcgt gctgaggggtg tgaccgcaag aggggtgaaaa ctccagcca acctctcag 180
tccctctctt tgcgagaggg aagccacctg ctatacaaac taatacccc tgcttgacc 240
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```

&lt;210&gt; 54

&lt;211&gt; 622

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 54

```

atgttttttca tttttccat gttatctatc caagcactgt tccatgggtca gcaagtccata 60
tttcataatg tggattttcc aaaataatta ttgaatacag ctattctatg gctactttta 120
gtgtttttgt ggtatgtggt gtgggaggtt ttatggaatt accagtatct taaattttca 180
aaggaacctt ggaagtctat cactctaaat gaaagtctgt cactctacat gaattatgtg 240
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gagagtttct agtttaatgg gttaaatttt tgttgttgca atagtaagtt tagtctctt 360
ataatatttc taaatgaaaa accataggta tttgttacca tgtgtgaaga ttactttgtt 420
aaaagcaaaa gtggtcgtgt gatatgctaa atgttaatta ctgattttat atgtttaaat 480
cacgccaaac aaattatgtc tgtgccatcc aggggtctgtt gttaatcttt ttctgagrac 540
ttggattggg ataaagggct tgtactatgc actttttatt aatgaataaa tagaaaacgt 600
tagtaacaaa aaaaaaaaaa an

```

&lt;210&gt; 55

&lt;211&gt; 1129

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 55

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gattttttatc tagaaactat atttacttaa accccctca ggaaagaggt tttaaaatca 60
aagatgggaa aatcgagaa aattgccctt ccccatggcc agcttggtca tggatatacac 120
ttgtatgagc aaccaaagat aaacagacag aaaagcaaat ataacttgcc actaaccaag 180
atcacctctg caaaaagaaa tgaaaacaac ttttggcagg attctgtttc atctgacaga 240
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ctaaattgat ttgtaattctg aaattactga caaactccta ttccattttt tgctaaactc 1020
aatctctggg tttgggtatat atccattcca gcttaatgcc tctaatttta atgccaaaca 1080

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aattgggtgt aatcaaatcc taaaataata ataattgggg cccccccctt

1129

<210> 56  
<400> 56  
000

<210> 57  
<400> 57  
000

<210> 58  
<211> 877  
<212> DNA  
<213> homo sapiens

<400> 58

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|------------|------------|------------|------------|-------------|-------------|-----|
| cacactgagg | gtttttaaca | ccattctccc | ccacttctct | cctgggtgac  | ataagagaga  | 60  |
| aataacctgt | agtacagcag | ctaaagtatt | ctcctttcag | agaatttttt  | tggagggtctc | 120 |
| taatatatat | ttcccccttg | tctctgtgat | ctcttattta | tactatatta  | ttgtcccatg  | 180 |
| tactttctaa | actgagcttg | gaacatttag | tattcctgca | attggacttc  | ccacttaaca  | 240 |
| attatacaga | ctttgctttt | agaaatagat | taggttccaa | acagaaaagt  | caagtgtaac  | 300 |
| aacaacaata | aaaatagatt | atgaaacagg | ctataattgg | ctcttttggg  | tttgataggg  | 360 |
| gcaagatgaa | aggcaacttt | cttgcttttg | aaatcatgtt | gggtaagagg  | taaggaatcc  | 420 |
| agctacaatt | ttatttagtg | ttgaaacggg | cttccttgaa | ttctccaggc  | cctatcattt  | 480 |
| ttttttttct | tactaatcag | aagagagctg | gggtagaagc | cccatgtttg  | tattccatga  | 540 |
| aacacgtcgg | gttggagtaa | aggcaaaaac | agctagacac | accagggtgtg | tctgtttgac  | 600 |
| atttataagc | tggcactcat | caacactcct | gtttctcctt | ctctctgggac | gtgtggatta  | 660 |
| aggggtgtga | gttgtgggaa | gaattgcccc | cgtacctcct | ggatttatta  | ttttctctcaa | 720 |
| ataccaacca | gtaagatccc | aaataacttg | agaaaaattg | ttcctgac    | tgtccacttc  | 780 |
| tgggtgtcaa | gattttactc | atcttcttag | tacattctat | gtattttata  | tgtataattt  | 840 |
| tatacaatta | aaaatagatt | tttgtctagt | gaaaaaaa   |             |             | 877 |

<210> 59  
<211> 1329  
<212> DNA  
<213> homo sapiens

<400> 59

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|-------------|-------------|------------|-------------|------------|-------------|------|
| gtcgggggagc | gcggggccgg  | ggcccagggg | accccgggcc  | acggagagcg | ggaagaggat  | 60   |
| ggattgcccg  | gccctcccc   | cggatggaa  | gaaggaggaa  | gtgatccgaa | aatctgggct  | 120  |
| aagtgtctggc | aagagcgatg  | tctactactt | cagtcgaagt  | ggtaagaagt | tcagaagcaa  | 180  |
| gcctcagttg  | gcaagggtacc | tgggaaatac | tgttgatctc  | agcagttttg | acttcagaac  | 240  |
| tggaaagatg  | atgcctagta  | aattacagaa | gaacaaacag  | agactgcgaa | acgatcctct  | 300  |
| caatcaaaaat | aagggtaaac  | cagacttgaa | tacaacattg  | ccaattagac | aaacagcatc  | 360  |
| aatttttcaaa | caaccggtaa  | ccaaagtcac | aaatcatcct  | agtaataaag | tgaaatcaga  | 420  |
| cccacaacga  | atgaatgaac  | agccacgtca | gctttttctgg | gagaagaggc | tacaaggact  | 480  |
| tagtgcatca  | gatgtaacag  | aacaaattat | aaaaaccatg  | gaactaccca | aagggtcttca | 540  |
| aggagttggg  | ccaggtagca  | atgatgagac | cctttttatct | gctgttgcca | gtgcttttga  | 600  |
| cacaagctct  | gcgccaatca  | cagggcaagt | ctccgctgct  | gtggaaaaga | accctgctgt  | 660  |
| ttggcttaac  | acatctcaac  | ccctctgcaa | agcttttatt  | gtcacagatg | aagacatcag  | 720  |
| gaaacaggaa  | gagcaggtac  | agcaagtacg | caagaaattg  | gaagaagcac | tgatggcaga  | 780  |
| catcttgtctg | cgagctgctg  | atacagaaga | gatggatatt  | gaaatggaca | gtggagatga  | 840  |
| agcctaagaa  | tatgatcagg  | taactttcga | ccgactttcc  | ccaagagaaa | attccttagaa | 900  |
| attgaacaaa  | aatgtttcca  | ctggcctttg | cctgtaagaa  | aaaaaatgta | cccgagcaca  | 960  |
| tagagctttt  | taatagcact  | aaccaatgcc | tttttagatg  | tatttttgat | gtatataatct | 1020 |
| attattcaaa  | aaatcatgtt  | tattttgagt | cctaggactt  | aaaattagtc | ttttgtaata  | 1080 |
| tcaagcagga  | ccctaagatg  | aagctgagct | tttgatgcca  | ggtgcaatct | actggaaatg  | 1140 |
| tagcacttac  | gtaaaacatt  | tgtttcccc  | acagttttta  | taagaacaga | tcaggaattc  | 1200 |
| taaataaatt  | tcccagttaa  | agattattgt | gacttcactg  | tatataaaca | tatttttata  | 1260 |
| ctttattgaa  | aggggacacc  | tgtacattct | tccatcatca  | ctgtaaagac | aaataaatga  | 1320 |
| ttatattca   |             |            |             |            |             | 1329 |

<210> 60  
 <211> 637  
 <212> DNA  
 <213> homo sapiens

<400> 60

|             |             |             |             |            |             |     |
|-------------|-------------|-------------|-------------|------------|-------------|-----|
| gtaggcgcta  | gtctggggcg  | agaggtttct  | gggagccaag  | agtggtaatg | gcgtctgtat  | 60  |
| gattcttcgga | gcctgctgca  | tcggacctcg  | gccagtcata  | aaagatgaca | acagcagcca  | 120 |
| ggccaacctt  | tgaacctgcc  | agaggtggaa  | ggggaaaagg  | agaaggtgat | ttgagccaac  | 180 |
| tttcaaagca  | gtattcaagc  | agagacctac  | cctctcatac  | aaagataaaa | tacagacaga  | 240 |
| ctactcagga  | tgcacctgaa  | gaggttcgta  | accgtgactt  | caggagagag | ttggaagaaa  | 300 |
| gagagagagc  | tgctgcaaga  | gagaaaaata  | gggatcgtcc  | aacccgagaa | catacaacct  | 360 |
| cctcttcagt  | gtcaaaaaag  | ccacggttag  | accagattcc  | tgccgccaac | ccttgatgcag | 420 |
| atgacctctt  | aacagatgag  | gaagatgaag  | atthttgaaga | agaaagtgat | gatgatgata  | 480 |
| ctgcagctct  | tcttgccagaa | ctggaaaaaa  | ttaaaaaaga  | aagagctgaa | aagggccaaag | 540 |
| gcccagggaa  | gggaccaagg  | gcaaaaaaag  | ctttaagggg  | gggaagggtt | tcgttttggg  | 600 |
| aaaacatttg  | ttgggcggga  | aaccttttcc  | ctttaattct  | gagcttggcc | cattccaagc  | 660 |
| ttaaggccga  | ctttgaaaag  | tttgaaaagga | gggtggg     |            |             | 697 |

<210> 61  
 <211> 1389  
 <212> DNA  
 <213> homo sapiens

<400> 61

|             |             |            |             |             |             |      |
|-------------|-------------|------------|-------------|-------------|-------------|------|
| cgaagaatag  | aattggccag  | gacctagggt | ctcatattct  | tggtattcct  | cctggatgga  | 60   |
| aaggctgttg  | gcataaatag  | gggacagagg | ctgatgctgg  | agtggccagt  | agaggtgggtg | 120  |
| gagcagagca  | gccatctttt  | aaagtggggc | gtatcaggct  | gggtttatth  | aaaagcaaca  | 180  |
| aaatgttttg  | gttaagaaaa  | ttatttttgc | ttcagtgtaa  | atcttcgcag  | tgttctaaac  | 240  |
| aaagtctcag  | cttctgctcg  | cccttttccc | tcactgatgt  | ctgcacttgg  | ttgaggtctc  | 300  |
| ctggagcctc  | acaggctctg  | ctgtttctcc | cttctcacct  | gccatccacg  | ccctgcaagc  | 360  |
| tcatgcaaac  | accttttctt  | cctcctgcgg | cagagtgtgt  | cagggtgcct  | gggcaggggc  | 420  |
| ttaaaacagt  | ccagcccttg  | ccatcccaaa | gctattgtta  | agccccccag  | gcgtcctcca  | 480  |
| cccacgcccc  | ctagcctgcc  | atgtccacag | ttccttgggc  | tgctgagggg  | ctagtgcagt  | 540  |
| ggctcctgacc | tctcttatca  | agagcacact | tctttgctgg  | ttgctccttt  | tgagcatatg  | 600  |
| cgtgtgatta  | tttggaacag  | ttagacttgc | cacgttgggt  | cagttttaga  | aattgtttct  | 660  |
| agctagaggg  | actggtgtcc  | ttccaagtct | agcatttggg  | gtatggaaaa  | ttgttgtggg  | 720  |
| gtgtggtagg  | gtttttgttt  | tcttttttga | gttttttttc  | cccccttagt  | ctcctggctt  | 780  |
| ttctcttttc  | cttcccttct  | ccactggccn | agcttggggc  | tcctcctcat  | gtcatccttc  | 840  |
| taggaaggcg  | cctgccccat  | cttgtctgcc | ggcagcatgc  | atccaaggcc  | agagctcagg  | 900  |
| cctgcagact  | gggctgggtg  | ctcctccgct | tcagggtatg  | ggagttgggtg | aaggggcttt  | 960  |
| caaaaaataa  | taagaaaaaa  | aaggtaaagt | ctttggtagc  | ttctatccac  | tcagatcctg  | 1020 |
| gaaggcagca  | aggttttgtg  | gatctagatt | cattaggaat  | gtcttcttgt  | cagccaggcc  | 1080 |
| aggacccggg  | cttgccaaga  | gcagaggccc | tcccagcaac  | caggatacca  | ccactttggg  | 1140 |
| ggctttgtgt  | acagaggtcc  | gggtctgaga | cctcataggc  | tgcaaaaatc  | tggggcagcc  | 1200 |
| accatcaaga  | agccctcttc  | aggggccaga | actcctttgc  | cagcgtggat  | ttctcaagtc  | 1260 |
| gggactgcat  | aattaaaagca | gttgcagttt | tatttttttt  | acagcttttt  | tcccaaaaat  | 1320 |
| gatttgtagt  | tgtgtgtgca  | gcacttcgcc | ctgatattgtg | tgctctacaa  | taaaaaccaa  | 1380 |
| atctaatat   |             |            |             |             |             | 1389 |

<210> 62  
 <211> 535  
 <212> DNA  
 <213> homo sapiens

<400> 62

|            |            |            |             |            |            |     |
|------------|------------|------------|-------------|------------|------------|-----|
| tgtattgagg | taataaattg | ttttactgac | aatttttccct | ttttctacac | taaaacaata | 60  |
| tgtgatata  | ttccctctct | gaagaggcaa | ttcattaaac  | tctcaaatth | tctatagaat | 120 |
| caagatagaa | cctttagata | ctccaactca | ccaaaatgta  | aaaaaactaa | caaaaatatt | 180 |
| tggtcttcaa | tattgctaaa | tattacatt  | tttagaatth  | atcaacatt  | aactagataa | 240 |
| ttgggcatgt | cttaattatg | catgtactta | tccatactaa  | taaaattgac | aatgctagtg | 300 |

```

catacttatt ggttttagtcc tattatcagg atataatcat ctgtgaggag gatattttaa 360
atactgtaaa tgataaacagt taatgatata cacatttaga ctgagtggca cactggcagg 420
gagacaaaaa acattacctcc catacttgtg tcatgattct tttttttttg agagagtctc 480
actctgttgc caggctggga gtacagtggc atgactctgg ctcaactgcaa cctct 535

```

```

<210> 53
<211> 1098
<212> DNA
<213> homo sapiens

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<400> 63
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gtgatttgac atttgaacaa attaggaagc tgaatcctgc agcaaaccac agactcagga 60
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ataacctcac aatcttcttt gatgtcaaaag gccatgcaca caaggctact gaggtcttaa 180
agaaaatgta tatggaattt cctcaactgt ataataatag tgtggtctgt tctttcttgc 240
cagaagtatt ctacaagatg agacaaacag atcgggatgt aataacagca ttaactcaca 300
gaccttggag cctaagccat acaggagatg ggaaaccacg ctatgatact ttctggaaac 360
attttatatt tgttatgatg gacattttgc tcgattggag catgcataat atcttgtggt 420
acctgtgtgg aatttcagct tccctcatgc aaaaggattt tgtatccccg gcctacttga 480
agaagtggtc agctaaagga atccagggtg ttggttggac tgttaatacc ttgatgaaa 540
agagttacta cgaatcccat cttgggttcca gctatatcac tgacagcctg gtagaagact 600
gcgaacctca cttctagact ttccagggtg gacgaaacgg gttcagaaac tgccaggggc 660
ctcatacagg gatatacaaa taccctttgt gctagcccag gccctgggga atcaggtgac 720
tcacacaaat gcaatagtgt gtcactgcat ttttacctga accaaagcta aaccgggtgt 780
tgccaccatg caccatggca tgcagaggtt caacactgtt gctcttgaaa atctgggtct 840
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ggataagcac agattgaatt gtacaatttg cagatgcaga tgtaaatgca tgggacatgc 960
atgataactc agagtggaca ttttaaaact tgccacactt atttcaaata tttgtactca 1020
gctatgttaa catgtactgt agacatcaaa cttgtggcca tactaataaa attaataaaa 1080
ggagcactaa aggaaaaa 1098

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<210> 64
<211> 1860
<212> DNA
<213> homo sapiens

```

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<400> 64
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atgaaggcag cttttctttt tctgaggaaa aaataggcat gggctacagg actattttaa 120
atgtctcatt tacagtataa aactcaaaagg tagatgtaat ttttacacct atgagtattt 180
gtccaatttc tgtctcttcc tcaccatttg gtatctattc tttatatgta aataagataa 240
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tggacattta ttgtagcact acataactga ttataaaaat ctgtaaatga attagcattt 360
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&lt;210&gt; 65

&lt;400&gt; 65

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&lt;210&gt; 66

&lt;211&gt; 205

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 66

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Cys<br>1   | Arg        | Thr        | Trp        | Ser<br>5   | Ile        | Leu        | Arg        | Gly        | Arg<br>10  | Met        | Trp        | Leu        | Ser        | Thr<br>15  | Asn        |
| Ser        | Ala        | Ala        | Asp<br>20  | Ala        | Ile        | Asn        | Pro        | Trp<br>25  | Pro        | Gly        | Arg        | Ser        | Ser<br>30  | Arg        | Pro        |
| Arg        | Ser        | Arg<br>35  | Ala        | Ala        | Val        | Pro        | His<br>40  | Arg        | Leu        | Leu        | His        | Leu<br>45  | Pro        | Pro        | Val        |
| Cys<br>50  | Ala        | Glu        | Leu        | Gln        | Gly        | Gln<br>55  | Gln        | Phe        | Tyr        | Ser        | Leu<br>60  | Glu        | Gly        | Ala        | Pro        |
| Tyr<br>65  | Cys        | Glu        | Gly        | Cys        | Tyr<br>70  | Thr        | Asp        | Thr        | Leu        | Glu<br>75  | Lys        | Cys        | Asn        | Thr        | Cys<br>80  |
| Gly        | Glu        | Pro        | Ile        | Thr<br>85  | Asp        | Arg        | Met        | Leu        | Arg<br>90  | Ala        | Thr        | Gly        | Lys        | Ala<br>95  | Tyr        |
| His        | Pro        | His        | Cys<br>100 | Phe        | Thr        | Cys        | Val        | Val<br>105 | Cys        | Ala        | Arg        | Pro        | Leu<br>110 | Glu        | Gly        |
| Thr        | Ser        | Phe<br>115 | Ile        | Val        | Asp        | Gln        | Ala<br>120 | Asn        | Arg        | Pro        | His        | Cys<br>125 | Val        | Pro        | Asp        |
| Tyr        | His<br>130 | Lys        | Gln        | Tyr        | Ala        | Pro<br>135 | Arg        | Cys        | Ser        | Val        | Cys<br>140 | Ser        | Glu        | Pro        | Ile        |
| Met<br>145 | Pro        | Glu        | Pro        | Gly        | Arg<br>150 | Asp        | Glu        | Thr        | Val        | Arg<br>155 | Val        | Val        | Ala        | Leu        | Asp<br>160 |
| Lys        | Asn        | Phe        | His        | Met<br>165 | Lys        | Cys        | Tyr        | Lys        | Cys<br>170 | Glu        | Asp        | Cys        | Gly        | Lys<br>175 | Pro        |
| Leu        | Ser        | Ile        | Glu<br>180 | Ala        | Asp        | Asp        | Asn        | Gly<br>185 | Cys        | Phe        | Pro        | Leu        | Asp<br>190 | Gly        | His        |

Val Leu Cys Arg Lys Cys His Thr Ala Arg Ala Gln Thr  
 195 200 205

<210> 57  
 <211> 150  
 <212> PRT  
 <213> hcmo sapiens

<400> 67

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Arg | Ala | Leu | Lys | Arg | Pro | Phe | Pro | Ser | Gly | Pro | Pro | Leu | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Arg | Ser | Pro | Ser | Leu | Glu | Ser | Gln | Ser | Arg | Lys | Thr | Pro | Arg | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Glu | Asp | Leu | Ala | Ser | Gly | Lys | Lys | Asp | Tyr | Thr | Phe | Gln | Arg | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Arg | Arg | Arg | Asp | Arg | Lys | Arg | Arg | Ala | Ser | Arg | Val | Ser | Leu | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Val | Asp | Pro | Ser | Asp | His | Gly | Gly | Pro | Gly | Val | Val | Ala | Asp | Glu | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Pro | His | Gln | Gly | Lys | Cys | Gly | Trp | Gly | Arg | Arg | Leu | Pro | Gly | Val | Arg |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Pro | Gly | Ala | Ala | Gly | Ala | Gln | Arg | Gln | Glu | Pro | Gly | Ser | Pro | Thr | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Trp | Gly | Gly | Gly | Pro | Pro | Arg | His | Val | Pro | Val | Gln | Pro | Val | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Val | Ser | Ala | Asp | Arg | Pro | Ala | Asp | Thr | Pro | Ala | Pro | Ser | Pro | Ser | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asp | Leu | Leu | Ser | His | Pro |     |     |     |     |     |     |     |     |     |     |
| 145 |     |     |     |     | 150 |     |     |     |     |     |     |     |     |     |     |

<210> 68  
 <211> 55  
 <212> PRT  
 <213> homo sapiens

<400> 68

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Glu | Cys | Arg | His | His | Asp | Gly | Asp | Val | Ser | Ser | Val | Gly | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Leu | Gln | Gly | Pro | Arg | Val | Leu | Gln | Gly | Gly | Leu | Gly | Val | Cys | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Ala | His | Gln | Val | Ala | Ser | Gln | Gln | Gly | Arg | Leu | Pro | Arg | Pro | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

Arg Ala Gly Leu Pro Leu Thr  
50 55

<210> 69  
<211> 182  
<212> PRT  
<213> homo sapiens

<400> 69

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser<br>1   | Val        | His        | Phe        | Pro<br>5   | Ala        | Ala        | Leu        | Arg        | Cys<br>10  | Glu        | Thr        | Ala        | Ala        | Leu<br>15  | Leu        |
| Trp        | Ser        | Leu        | Arg<br>20  | Ala        | Ala        | Arg        | His        | His<br>25  | Asp        | Ser        | Gln        | Arg        | Thr<br>30  | Leu        | Arg        |
| Arg        | Ala        | Arg<br>35  | Lys        | Thr        | Thr        | Pro        | Ser<br>40  | Arg        | Gly        | Leu        | Cys        | Gly<br>45  | Ala        | Ala        | Thr        |
| Gly        | Ser<br>50  | Gly        | Gly        | Arg        | Ala        | Glu<br>55  | Cys        | Pro        | Cys        | Ala        | Trp<br>60  | Ile        | Arg        | Ala        | Thr        |
| Met<br>65  | Val        | Ala        | Arg        | Val        | Trp<br>70  | Ser        | Leu        | Met        | Arg        | Phe<br>75  | Leu        | Ile        | Lys        | Gly        | Ser<br>80  |
| Val        | Ala        | Gly        | Gly        | Ala<br>85  | Val        | Tyr        | Leu        | Val        | Tyr<br>90  | Asp        | Gln        | Glu        | Leu        | Leu<br>95  | Gly        |
| Pro        | Ser        | Asp        | Lys<br>100 | Ser        | Gln        | Ala        | Ala        | Leu<br>105 | Gln        | Lys        | Ala        | Gly        | Glu<br>110 | Val        | Val        |
| Pro        | Pro        | Ala<br>115 | Met        | Tyr        | Gln        | Phe        | Ser<br>120 | Gln        | Tyr        | Val        | Cys        | Gln<br>125 | Gln        | Thr        | Gly        |
| Leu        | Gln<br>130 | Ile        | Pro        | Gln        | Leu        | Pro<br>135 | Ala        | Pro        | Pro        | Lys        | Ile<br>140 | Tyr        | Phe        | Pro        | Ile        |
| Arg<br>145 | Asp        | Ser        | Trp        | Asn        | Ala<br>150 | Gly        | Ile        | Met        | Thr        | Val<br>155 | Met        | Ser        | Ala        | Leu        | Ser<br>160 |
| Val        | Ala        | Pro        | Ser        | Lys<br>165 | Ala        | Arg        | Glu        | Tyr        | Ser<br>170 | Lys        | Glu        | Gly        | Trp        | Glu<br>175 | Tyr        |
| Val        | Lys        | Ala        | Arg<br>180 | Thr        | Lys        |            |            |            |            |            |            |            |            |            |            |

<210> 70  
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<212> PRT  
<213> homo sapiens

<400> 70

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Asp | Ser | Gly | Leu | Gly | Pro | His | Ser | Glu | Gly | Arg | Pro | Pro | Asp |
| 1   |     |     |     | 5   |     |     |     | 23  | 10  |     |     |     |     | 15  |     |
| Cys | Arg | Pro | Asn | Lys | Gly | Leu | Gln | Lys |     |     |     |     |     |     |     |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     |     |     |

<210> 71  
 <211> 56  
 <212> PRT  
 <213> homo sapiens  
 <400> 71

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Glu | Lys | Asn | Thr | Ser | Phe | Leu | Tyr | Ser | Asp | Val | Gly | Ala | Thr | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Met | Lys | Ser | Val | Leu | Tyr | Glu | Ser | Tyr | Thr | Lys | Met | Gly | Arg | His | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Asn | Cys | Ala | Arg | Tyr | Leu | Lys | Cys | Met | Phe | Arg | Lys | Ala | Phe | Tyr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln | Leu | Arg | Asn | Met | Thr | Tyr | Phe |     |     |     |     |     |     |     |     |
|     | 50  |     |     |     |     | 55  |     |     |     |     |     |     |     |     |     |

<210> 72  
 <400> 72  
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 <210> 73  
 <211> 291  
 <212> PRT  
 <213> homo sapiens  
 <400> 73

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Arg | Leu | Val | Asp | Ile | Lys | Lys | Gly | Asn | Thr | Leu | Leu | Leu | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| His | Leu | Lys | Arg | Ile | Ile | Ser | Asp | Leu | Cys | Lys | Leu | Tyr | Asn | Leu | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | His | Pro | Asp | Val | Glu | Met | Leu | Asp | Gln | Pro | Leu | Pro | Ala | Glu | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Cys | Thr | Gln | Glu | Asp | Val | Ser | Ser | Glu | Asp | Glu | Asp | Glu | Glu | Met | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Glu | Asp | Thr | Glu | Asp | Leu | Asp | His | Tyr | Glu | Met | Lys | Glu | Glu | Glu | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ala | Glu | Gly | Lys | Lys | Ser | Glu | Asp | Asp | Gly | Ile | Gly | Lys | Glu | Asn | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Ile | Leu | Glu | Lys | Ile | Lys | Lys | Asn | Gln | Arg | Gln | Asp | Tyr | Leu | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Val | Ser | Gly | Ser | Val | Gln | Ala | Thr | Asp | Arg | Leu | Met | Lys | Glu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Arg | Asp | Ile | Tyr | Arg | Ser | Gln | Ser | Phe | Lys | Gly | Gly | Asn | Tyr | Ala |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Glu | Leu | Val | Asn | Asp | Ser | Leu | Tyr | Asp | Trp | Asn | Val | Lys | Leu | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Lys | Val | Asp | Gln | Asp | Ser | Ala | Leu | His | Asn | Asp | Leu | Gln | Ile | Leu | Lys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Glu | Lys | Glu | Gly | Ala | Asp | Phe | Ile | Leu | Leu | Asn | Phe | Ser | Phe | Lys | Asp |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Asn | Phe | Pro | Phe | Asp | Pro | Pro | Phe | Val | Arg | Val | Val | Ser | Pro | Val | Leu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ser | Gly | Gly | Tyr | Val | Leu | Gly | Gly | Gly | Ala | Ile | Cys | Met | Glu | Leu | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Thr | Lys | Gln | Gly | Trp | Ser | Ser | Ala | Tyr | Ser | Ile | Glu | Ser | Val | Ile | Met |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Gln | Ile | Ser | Ala | Thr | Leu | Val | Lys | Gly | Lys | Ala | Arg | Val | Gln | Phe | Gly |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Ala | Asn | Lys | Ser | Gln | Tyr | Ser | Leu | Thr | Arg | Ala | Gln | Gln | Ser | Tyr | Lys |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Ser | Leu | Val | Gln | Ile | His | Glu | Lys | Asn | Gly | Trp | Tyr | Thr | Pro | Pro | Lys |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Glu | Asp | Gly |     |     |     |     |     |     |     |     |     |     |     |     |     |
|     | 290 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 74  
 <211> 253  
 <212> PRT  
 <213> homo sapiens

<400> 74

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ser | Val | Val | Arg | Arg | Cys | Leu | Lys | Met | Ala | Ala | Glu | Glu | Pro | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gln | Gln | Lys | Gln | Glu | Pro | Leu | Gly | Ser | Asp | Ser | Glu | Gly | Val | Asn | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Ala | Tyr | Asp | Glu | Ala | Ile | Met | Ala | Gln | Gln | Asp | Arg | Ile | Gln | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |



|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Glu        | Ile<br>50  | Ala        | Val        | Gln        | Asn        | Pro<br>55  | Leu        | Val        | Ser        | Glu        | Arg<br>60  | Leu        | Glu        | Leu        | Ser        |
| Val<br>65  | Leu        | Tyr        | Lys        | Glu        | Tyr<br>70  | Ala        | Glu        | Asp        | Asp        | Asn<br>75  | Ile        | Tyr        | Gln        | Gln        | Lys<br>80  |
| Ile        | Lys        | Asp        | Leu        | His<br>85  | Lys        | Lys        | Tyr        | Ser        | Tyr<br>90  | Ile        | Arg        | Lys        | Thr        | Arg<br>95  | Pro        |
| Asp        | Gly        | Asn        | Cys<br>100 | Phe        | Tyr        | Arg        | Ala        | Phe<br>105 | Gly        | Phe        | Ser        | His        | Leu<br>110 | Glu        | Ala        |
| Leu        | Leu        | Asp<br>115 | Asp        | Ser        | Lys        | Glu        | Leu<br>120 | Gln        | Arg        | Phe        | Lys        | Ala<br>125 | Val        | Ser        | Ala        |
| Lys        | Ser<br>130 | Lys        | Glu        | Asp        | Leu        | Val<br>135 | Ser        | Gln        | Gly        | Phe        | Thr<br>140 | Glu        | Phe        | Thr        | Ile        |
| Glu<br>145 | Asp        | Phe        | His        | Asn        | Thr<br>150 | Phe        | Met        | Asp        | Leu        | Ile<br>155 | Glu        | Gln        | Val        | Glu        | Lys<br>160 |
| Gln        | Thr        | Ser        | Val        | Ala<br>165 | Asp        | Leu        | Leu        | Ala        | Ser<br>170 | Phe        | Asn        | Asp        | Gln        | Ser<br>175 | Thr        |
| Ser        | Asp        | Tyr        | Leu<br>180 | Val        | Val        | Tyr        | Leu        | Arg<br>185 | Leu        | Leu        | Thr        | Ser        | Gly<br>190 | Tyr        | Leu        |
| Gln        | Arg        | Glu<br>195 | Ser        | Lys        | Phe        | Phe        | Glu<br>200 | His        | Phe        | Ile        | Glu        | Gly<br>205 | Gly        | Arg        | Thr        |
| Val        | Lys<br>210 | Glu        | Phe        | Cys        | Gln        | Gln<br>215 | Glu        | Val        | Glu        | Pro        | Met<br>220 | Cys        | Lys        | Glu        | Ser        |
| Asp<br>225 | His        | Ile        | His        | Ile        | Ile<br>230 | Ala        | Leu        | Ala        | Gln        | Ala<br>235 | Leu        | Ser        | Val        | Ser        | Ile<br>240 |
| Gln        | Val        | Glu        | Tyr        | Met<br>245 | Asp        | Arg        | Gly        | Glu        | Gly<br>250 | Gly        | Thr        | Thr        |            |            |            |

&lt;210&gt; 75

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 75

|          |     |     |           |          |     |     |     |           |           |     |     |     |           |           |     |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Glu<br>1 | Lys | Phe | Leu       | Asn<br>5 | Met | Gly | Ala | Pro       | Leu<br>10 | Gly | Val | Gly | Leu       | Gly<br>15 | Leu |
| Val      | Phe | Val | Ser<br>20 | Ser      | Ile | Gly | Ile | Tyr<br>25 | Val       | Ser | Ser | Thr | Tyr<br>30 | Pro       | Pro |

|           |           |           |            |           |           |           |           |            |           |           |           |           |     |           |           |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----|-----------|-----------|
| Val       | Ala       | Gly<br>35 | Ala        | Thr       | Leu       | Tyr       | Ser<br>40 | Val        | Ala       | Met       | Tyr       | Gly<br>45 | Gly | Leu       | Val       |
| Leu       | Phe<br>50 | Ser       | Met        | Phe       | Leu       | Leu<br>55 | Tyr       | Asp        | Thr       | Gln       | Lys<br>60 | Val       | Ile | Lys       | Arg       |
| Ala<br>65 | Glu       | Val       | Ser        | Pro       | Met<br>70 | Tyr       | Gly       | Val        | Gln       | Lys<br>75 | Tyr       | Asp       | Pro | Ile       | Asn<br>80 |
| Ser       | Met       | Leu       | Ser        | Ile<br>85 | Tyr       | Met       | Asp       | Thr        | Leu<br>90 | Asn       | Ile       | Phe       | Met | Arg<br>95 | Val       |
| Ala       | Thr       | Met       | Leu<br>100 | Ala       | Thr       | Gly       | Gly       | Asn<br>105 | Arg       | Lys       | Lys       |           |     |           |           |

<210> 76  
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<400> 82

|          |           |           |           |          |     |           |           |           |           |     |           |           |           |           |     |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Met<br>1 | His       | Arg       | Asp       | Ser<br>5 | Cys | Pro       | Leu       | Asp       | Cys<br>10 | Lys | Val       | Tyr       | Val       | Gly<br>15 | Asn |
| Leu      | Gly       | Asn       | Asn<br>20 | Gly      | Asn | Lys       | Thr       | Glu<br>25 | Leu       | Glu | Arg       | Ala       | Phe<br>30 | Gly       | Tyr |
| Tyr      | Gly       | Pro<br>35 | Leu       | Arg      | Ser | Val       | Trp<br>40 | Val       | Ala       | Arg | Asn       | Pro<br>45 | Pro       | Gly       | Phe |
| Ala      | Phe<br>50 | Val       | Glu       | Phe      | Glu | Asp<br>55 | Pro       | Arg       | Asp       | Ala | Ala<br>60 | Asp       | Ala       | Val       | Arg |

|            |            |            |            |           |            |            |            |            |           |            |            |            |            |           |            |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Glu<br>65  | Leu        | Asp        | Gly        | Arg       | Thr<br>70  | Leu        | Cys        | Gly        | Cys       | Arg<br>75  | Val        | Arg        | Val        | Glu       | Leu<br>80  |
| Ser        | Asn        | Gly        | Glu        | Lys<br>85 | Arg        | Ser        | Arg        | Asn        | Arg<br>90 | Gly        | Pro        | Pro        | Pro        | Ser<br>95 | Trp        |
| Gly        | Arg        | Arg        | Pro<br>100 | Arg       | Asp        | Asp        | Tyr        | Arg<br>105 | Arg       | Arg        | Ser        | Pro        | Pro<br>110 | Pro       | Arg        |
| Arg        | Arg        | Ser<br>115 | Pro        | Arg       | Arg        | Arg        | Ser<br>120 | Phe        | Ser       | Arg        | Ser        | Arg<br>125 | Ser        | Arg       | Ser        |
| Leu        | Ser<br>130 | Arg        | Asp        | Arg       | Arg        | Arg<br>135 | Glu        | Arg        | Ser       | Leu        | Ser<br>140 | Arg        | Glu        | Arg       | Asn        |
| His<br>145 | Lys        | Pro        | Ser        | Arg       | Ser<br>150 | Phe        | Ser        | Arg        | Ser       | Arg<br>155 | Ser        | Arg        | Ser        | Arg       | Ser<br>160 |

Asn Glu Arg Lys

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<211> 148

<212> PRT

<213> homo sapiens

<400> 83

|           |           |            |            |           |           |           |            |            |           |           |           |            |            |           |           |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Glu<br>1  | Ala       | Ala        | Leu        | Thr<br>5  | Leu       | Cys       | His        | Leu        | Leu<br>10 | Ser       | Ser       | Trp        | Val        | Ser<br>15 | Leu       |
| Glu       | Ser       | Leu        | Thr<br>20  | Leu       | Ser       | Tyr       | Asn        | Gly<br>25  | Leu       | Gly       | Ser       | Asn        | Ile<br>30  | Phe       | Arg       |
| Leu       | Leu       | Asp<br>35  | Ser        | Leu       | Arg       | Ala       | Leu<br>40  | Ser        | Gly       | Gln       | Ala       | Gly<br>45  | Cys        | Arg       | Leu       |
| Arg       | Ala<br>50 | Leu        | His        | Leu       | Ser       | Asp<br>55 | Leu        | Phe        | Ser       | Pro       | Leu<br>60 | Pro        | Ile        | Leu       | Glu       |
| Leu<br>65 | Thr       | Arg        | Ala        | Ile       | Val<br>70 | Arg       | Ala        | Leu        | Pro       | Leu<br>75 | Leu       | Arg        | Val        | Leu       | Ser<br>80 |
| Ile       | Arg       | Val        | Asp        | His<br>85 | Pro       | Ser       | Gln        | Arg        | Asp<br>90 | Asn       | Pro       | Gly        | Val        | Pro<br>95 | Gly       |
| Asn       | Ala       | Gly        | Pro<br>100 | Pro       | Ser       | His       | Ile        | Ile<br>105 | Gly       | Asp       | Glu       | Glu        | Ile<br>110 | Pro       | Glu       |
| Asn       | Cys       | Leu<br>115 | Glu        | Gln       | Leu       | Glu       | Met<br>120 | Xxx        | Ile       | Ser       | Thr       | Gly<br>125 | Ser        | Pro       | Ala       |

28

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Thr | Ala | Val | Leu | Arg | Ser | Glu | Gly | Leu | Gly | Phe | Ser | Ala | Ala |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Ala | Val | Pro | Gly |
| 145 |     |     |     |

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<400> 90

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asp | Gly | Ala | Asp | Gly | Ala | Phe | Tyr | Pro | Asp | Glu | Ile | Gln | Arg | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Val | Arg | Val | Pro | Ser | Trp | Gly | Leu | Glu | Asp | Asn | Val | Val | Cys | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Pro | Ala | Arg | Asn | Phe | Ser | Arg | Pro | Asp | Gly | Leu | Glu | Asp | Ser | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asp | Ser | Lys | Glu | Asp | Glu | Asn | Val | Pro | Thr | Ala | Pro | Asp | Pro | Pro | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | His | Leu | Arg | Gly | His | Gly | Thr | Gly | Phe | Cys | Phe | Asp | Ser | Ser | Phe |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Asp | Val | His | Lys | Lys | Cys | Pro | Leu | Cys | Glu | Leu | Met | Phe | Pro | Pro | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Tyr | Asp | Gln | Ser | Lys | Phe | Glu | Glu | His | Val | Glu | Ser | His | Trp | Lys | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

Cys Pro Met Cys Ser Glu Gln Phe<sup>29</sup> Pro Pro Asp Tyr Asp Gln Gln Val  
 115 120 125

Phe Glu Arg His Val Gln Thr His Phe Asp Gln Asn Val Leu Asn Phe  
 130 135 140

Asp  
 145

<210> 91  
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 <212> PRT  
 <213> homo sapiens

<400> 91

Asp Lys Ser Ser Ala Cys Arg Arg Asn Gly Asn Tyr Ser Asp Glu Lys  
 1 5 10 15

Lys Asp Ala Met Tyr Trp Glu Lys Arg Arg Lys Asn Asn Glu Ala Ala  
 20 25 30

Lys Arg Ser Arg Glu Lys Arg Arg Leu Asn Asp Leu Val Leu Glu Asn  
 35 40 45

Lys Leu Ile Ala Leu Gly Glu Glu Asn Ala Thr Leu Lys Ala Glu Leu  
 50 55 60

Leu Ser Leu Lys Leu Lys Phe Gly Leu Ile Ser Ser Thr Ala Tyr Ala  
 65 70 75 80

Gln Glu Ile Gln Lys Leu Ser Asn Ser Thr Ala Val Tyr Phe Gln Asp  
 85 90 95

Tyr Gln Thr Ser Lys Ser Asn Val Ser Ser Phe Val Asp Glu His Glu  
 100 105 110

Pro Ser Met Val Ser Ser Ser Cys Ile Ser Val Ile Lys His Ser Pro  
 115 120 125

Gln Ser Ser Leu Ser Asp Val Ser Glu Val Ser Ser Val Glu His Thr  
 130 135 140

Gln Glu Ser Ser Val Gln Gly Ser Cys Arg Ser Pro Glu Asn Lys Phe  
 145 150 155 160

Gln Ile Ile Lys Gln Glu Pro Met Glu Leu Glu Ser Tyr Thr Arg Glu  
 165 170 175

Pro Arg Asp Asp Arg Gly Ser Tyr Thr Ala Ser Ile Tyr Gln Asn Tyr  
 180 185 190

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Met        | Gly        | Asn<br>195 | Ser        | Phe        | Ser        | Gly        | Tyr<br>200 | Ser        | His        | Ser        | Pro        | Pro<br>205 | Leu        | Leu        | Gln        |
| Val        | Asn<br>210 | Arg        | Ser        | Ser        | Ser        | Asn<br>215 | Ser        | Pro        | Arg        | Thr        | Ser<br>220 | Glu        | Thr        | Asp        | Asp        |
| Gly<br>225 | Val        | Val        | Gly        | Lys        | Ser<br>230 | Ser        | Asp        | Gly        | Glu        | Asp<br>235 | Glu        | Gln        | Gln        | Val        | Pro<br>240 |
| Lys        | Gly        | Pro        | Ile        | His<br>245 | Ser        | Pro        | Val        | Glu        | Leu<br>250 | Lys        | His        | Val        | His        | Ala<br>255 | Thr        |
| Val        | Val        | Lys        | Val<br>260 | Pro        | Glu        | Val        | Asn        | Ser<br>265 | Ser        | Ala        | Leu        | Pro        | His<br>270 | Lys        | Leu        |
| Arg        | Ile        | Lys<br>275 | Ala        | Lys        | Ala        | Met        | Gln<br>280 | Ile        | Lys        |            |            |            |            |            |            |

<210> 92  
 <211> 92  
 <212> PRT  
 <213> homo sapiens

<400> 92

|           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Met<br>1  | Ala       | Ser       | Leu       | Gly<br>5  | His       | Ile       | Leu       | Val       | Phe<br>10 | Cys       | Val       | Gly       | Leu       | Leu<br>15 | Thr       |
| Met       | Ala       | Lys       | Ala<br>20 | Glu       | Ser       | Pro       | Lys       | Glu<br>25 | His       | Asp       | Pro       | Phe       | Thr<br>30 | Tyr       | Asp       |
| Tyr       | Gln       | Ser<br>35 | Leu       | Gln       | Ile       | Gly       | Gly<br>40 | Leu       | Val       | Ile       | Ala       | Gly<br>45 | Ile       | Leu       | Phe       |
| Ile       | Leu<br>50 | Gly       | Ile       | Leu       | Ile       | Val<br>55 | Leu       | Ser       | Arg       | Arg       | Cys<br>60 | Arg       | Cys       | Lys       | Phe       |
| Asn<br>65 | Gln       | Gln       | Gln       | Arg       | Thr<br>70 | Gly       | Glu       | Pro       | Asp       | Glu<br>75 | Glu       | Glu       | Gly       | Thr       | Phe<br>80 |
| Arg       | Ser       | Ser       | Ile       | Arg<br>85 | Arg       | Leu       | Ser       | Thr       | Arg<br>90 | Arg       | Arg       |           |           |           |           |

<210> 93  
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 <212> PRT  
 <213> homo sapiens

<400> 93

|          |     |     |           |          |     |     |     |           |           |     |     |     |           |           |     |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Trp<br>1 | Thr | Gly | Thr       | Gly<br>5 | Arg | Gly | Ala | Val       | Ala<br>10 | Ile | Met | Ala | Asp       | Pro<br>15 | Asp |
| Pro      | Arg | Tyr | Pro<br>20 | Arg      | Ser | Ser | Ile | Glu<br>25 | Asp       | Asp | Phe | Asn | Tyr<br>30 | Gly       | Ser |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Ala | Ser | Ala | Thr | Val | His | Ile | Arg | Met | Ala | Phe | Leu | Arg | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Tyr | Ser | Ile | Leu | Ser | Leu | Gln | Val | Leu | Leu | Thr | Thr | Val | Thr | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | Val | Phe | Leu | Tyr | Phe | Glu | Ser | Val | Arg | Thr | Phe | Val | His | Glu | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Pro | Ala | Leu | Ile | Leu | Leu | Phe | Ala | Leu | Gly | Ser | Leu | Gly | Leu | Ile | Phe |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Leu | Thr | Leu | Asn | Arg | His | Lys | Tyr | Pro | Leu | Asn | Leu | Tyr | Leu | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe | Gly | Phe | Thr | Leu | Leu | Glu | Ala | Leu | Thr | Val | Ala | Val | Val | Val | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Met | Met | Tyr | Ile | Leu | Ser | Ala | Ser | Phe | His | Thr |     |     |     |     |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

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 <213> homo sapiens

<400> 97

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Pro | Leu | Leu | Leu | Pro | Leu | His | Thr | Pro | Val | Ala | Gly | Arg | Asn |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Gly | Phe | Pro | Glu | Ser | Leu | Gly | Val | Pro | Pro | Phe | Leu | Pro | His | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Gly | Thr | Pro | Arg | Ala | Pro | Gly | Leu | Phe | Leu | Leu | Leu | Phe | Ser | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Trp | Ala | Val |     |     |     |     |     |     |     |     |     |     |     |     |     |
|     | 50  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

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 <213> homo sapiens

&lt;400&gt; 98

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|----------|-----------|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Phe<br>1 | Phe       | Leu       | Tyr       | Ser<br>5 | Phe | Pro | Phe       | Thr       | Pro<br>10 | Pro | Trp | Leu       | Glu       | Gly<br>15 | Thr |
| Ser      | Ala       | Ser       | Leu<br>20 | Lys      | Ala | Trp | Gly       | Ser<br>25 | His       | Pro | Ser | Tyr       | Pro<br>30 | Thr       | Arg |
| Glu      | Glu       | Arg<br>35 | Pro       | Gly      | Pro | Arg | Ala<br>40 | Cys       | Phe       | Ser | Ser | Cys<br>45 | Phe       | Pro       | Phe |
| Gly      | Gln<br>50 | Phe       | Asp       | His      |     |     |           |           |           |     |     |           |           |           |     |

&lt;210&gt; 99

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 99

|          |           |           |           |          |     |     |           |           |           |     |     |           |           |           |     |
|----------|-----------|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Pro<br>1 | Leu       | Asp       | Cys       | Ala<br>5 | Thr | Phe | Val       | Phe       | Val<br>10 | Phe | Leu | Asn       | Phe       | Phe<br>15 | Lys |
| Pro      | Arg       | Met       | Ile<br>20 | Ser      | Pro | Ala | Ser       | Phe<br>25 | Ser       | Ser | Pro | Ser       | Ser<br>30 | Gln       | Thr |
| Glu      | Phe       | Lys<br>35 | Gly       | His      | Phe | Ser | Ser<br>40 | Ser       | Phe       | Trp | His | Leu<br>45 | Gln       | Pro       | Gln |
| Ser      | Gly<br>50 | Ile       | Phe       |          |     |     |           |           |           |     |     |           |           |           |     |

&lt;210&gt; 100

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 100

|           |           |           |           |          |           |           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Pro<br>1  | Phe       | Ser       | Ser       | Ser<br>5 | Val       | Ser       | Phe       | Phe       | Gly<br>10 | Thr       | Ala       | Pro       | Ser       | Cys<br>15 | Leu       |
| Leu       | Glu       | Gly       | Trp<br>20 | Ile      | Leu       | Val       | Cys       | Ala<br>25 | Leu       | Asp       | Arg       | Tyr       | Arg<br>30 | Ile       | Asn       |
| Thr       | Cys       | Ala<br>35 | Leu       | Arg      | Thr       | Gly       | Ser<br>40 | Pro       | Arg       | Phe       | Ile       | Gln<br>45 | Ser       | Ala       | His       |
| Tyr       | Arg<br>50 | Lys       | Leu       | Leu      | Cys       | Gln<br>55 | Asn       | Pro       | Gly       | Lys       | Asp<br>60 | Pro       | Thr       | Pro       | Gly       |
| Ser<br>65 | Pro       | Ser       | Ser       | Leu      | Leu<br>70 | Thr       | Ser       | Thr       | Arg       | Ala<br>75 | Val       | Leu       | Leu       | Phe       | Phe<br>80 |
| Ile       | Leu       | Leu       | Phe       | Tyr      | Cys       | Phe       | Cys       | Cys       | Gly       | His       | Tyr       | His       | Trp       | Gln       | Ser       |



Ser Phe Ser Pro Phe Leu Asp Ile Gly Val Leu Ser Leu Lys Asp Ser  
100 105 110

Thr Leu Arg Leu Lys Val Pro Lys Ala Ala  
115 120

<210> 101  
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<212> PRT  
<213> homo sapiens

<400> 101

Leu Phe Phe Phe Cys Phe Leu Phe Trp Asp Cys Ala Ile Met Phe Ile  
1 5 10 15

Arg Arg Leu Asp Phe Gly Val Cys Ser Arg Gln Ile Gln Asn Lys Tyr  
20 25 30

Leu Arg Leu Glu Asn Arg Lys Ser Thr Ile His Thr Lys Cys Ser Leu  
35 40 45

Gln Glu Val Ala Val Ser Lys Ser Arg Gln Gly Pro Asn Ser Gly Gln  
50 55 60

Pro Leu Leu Pro Ala Asp Leu Asn Lys Gly Cys Ala Ile Val Phe Tyr  
65 70 75 80

Phe Ile Ile Leu Leu Leu Leu Leu Trp Ser Leu Ser Leu Ala Lys Phe  
85 90 95

Leu Phe Pro Phe Pro Gly His Arg Gly Pro Val Phe Lys Arg Phe His  
100 105 110

Ser Glu Ala Glu Gly Ala Lys Ser Cys Leu Arg Ser Gly Leu  
115 120 125

<210> 102  
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<212> PRT  
<213> homo sapiens

<400> 102

Ile Asp Phe Glu Gly Lys Glu Arg Gly Lys Gly Gln Gly Arg Asp Thr  
1 5 10 15

Pro Pro Leu Pro Leu Ser Trp Ala Gln Lys Leu Gly Gly Gly Arg Glu  
20 25 30

Arg Ile Phe Thr Phe Phe Lys Leu Leu Phe Ser Glu Trp Asn Lys Leu  
35 40 45

Gly Gln Gly Ala Gln Ala Leu<sup>34</sup> Ser Ser Val Pro His Thr Pro Leu Leu  
50 55 60

Arg Ser Phe Ile Gln Lys Asn Ile Ser  
65 70

<210> 103  
<211> 143  
<212> PRT  
<213> homo sapiens

<400> 103

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Arg | Gly | Arg | Arg | Glu | Gly | Arg | Val | Arg | Val | Glu | Thr | Pro | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Cys | Pro | Phe | Pro | Gly | Pro | Arg | Ser | Trp | Gly | Glu | Gly | Gly | Lys | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Leu | His | Phe | Leu | Asn | Cys | Tyr | Phe | Leu | Asn | Gly | Thr | Ser | Trp | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | Gly | Pro | Arg | Pro | Cys | Pro | Leu | Ser | Leu | Thr | Pro | Leu | Cys | Ser | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| His | Ser | Phe | Lys | Lys | Thr | Phe | Leu | Glu | His | Leu | Leu | Cys | Pro | Ala | Tyr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ala | Arg | Pro | Thr | Ser | Val | Cys | Val | Gly | Gly | Leu | Tyr | Ala | Ser | Ser | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Val | Pro | Pro | Cys | Pro | Ser | Phe | Thr | Gly | Ala | Phe | Gly | Gly | Ser | Val | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Gly | Thr | Phe | Cys | Gly | Val | Trp | Gly | Ser | Pro | Gly | Ser | Pro | Thr | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Ser | Pro | Ser | Pro | Val | Pro | Thr | His | Leu | Leu | Gln | Pro | Pro | Ala |     |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

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<213> homo sapiens

<400> 104

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Arg | Pro | Thr | Ile | Phe | Thr | Pro | Arg | Pro | Pro | Ala | Leu | Gly | Glu | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Thr | Thr | Thr | Ser | Pro | Leu | Asp | Ile | Pro | Leu | Gly | Thr | Gly | Met | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Pro | Leu | Thr | Val | Arg | Pro | Trp | Gly | Glu | Pro | Lys | Ala | Leu | Thr | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ile | Ala | Met | Leu | Gly | Gly | Gly | Ala | Ser | Glu | Thr | Val | Gly | Arg | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ile | Leu | Gly | Ala | Ala | Pro | Ser | Gln | Gln | Gly | Ile | Arg | Gln | Gly | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Asp | Gly | Leu | Ala | Gln | Gly | Lys | Gly | Thr | Ala | Trp | Ser | Gly | Phe |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Ile | Pro | Lys | Pro | His | Arg | Arg | Ser | His | Leu | Leu | Gln | Ile | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Gln | Arg | His | Arg |
|     |     | 115 |     |

&lt;210&gt; 105

&lt;211&gt; 22

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 105

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Met | Gly | Lys | Glu | Ala | Leu | Met | Ser | Trp | Arg | Arg | Asp | Pro | Pro | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Ser | Trp | Trp | Ala |
|     |     |     | 20  |     |     |

&lt;210&gt; 106

&lt;400&gt; 106

000

&lt;210&gt; 107

&lt;400&gt; 107

000

&lt;210&gt; 108

&lt;400&gt; 108

000

&lt;210&gt; 109

&lt;211&gt; 165

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 109

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Gly | Pro | Trp | Glu | Ala | Phe | Pro | Asp | Gly | Ile | Gly | Arg | Arg | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Arg | Ala | Arg | Leu | Pro | Gln | Tyr | Lys | Arg | Pro | Pro | Gly | Gly | Gly | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Asp | Ser | Gly | Arg | Arg | Asn | Met | Ala | Val | Ala | Asp | Leu | Ala | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Pro | Asp | Val | Asp | Ile | Asp | Ser | Asp | Gly | Val | Phe | Lys | Tyr | Val | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|           |     |     |     |     |           |     |     |     |     |           |     |     |     |     |           |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|
| Ile<br>65 | Arg | Val | His | Ser | Ala<br>70 | Pro | Arg | Ser | Gly | Ala<br>75 | Pro | Ala | Ala | Glu | Ser<br>80 |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|

|     |     |     |     |           |     |     |     |     |           |     |     |     |     |           |     |
|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Lys | Glu | Ile | Val | Arg<br>95 | Gly | Tyr | Lys | Trp | Ala<br>90 | Glu | Tyr | His | Ala | Asp<br>95 | Ile |
|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

|     |     |     |            |     |     |     |     |            |     |     |     |     |            |     |     |
|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|
| Tyr | Asp | Lys | Val<br>100 | Ser | Gly | Asp | Met | Gln<br>105 | Lys | Gln | Gly | Cys | Asp<br>110 | Cys | Glu |
|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|

|     |     |            |     |     |     |     |            |     |     |     |     |            |     |     |     |
|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|
| Cys | Leu | Gly<br>115 | Gly | Gly | Arg | Ile | Ser<br>120 | His | Gln | Ser | Gln | Asp<br>125 | Lys | Lys | Ile |
|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|

|     |            |     |     |     |     |            |     |     |     |     |            |     |     |     |     |
|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|
| His | Val<br>130 | Tyr | Gly | Tyr | Ser | Met<br>135 | Ala | Tyr | Gly | Pro | Ala<br>140 | Gln | His | Ala | Ile |
|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|

|            |     |     |     |     |            |     |     |     |     |            |     |     |     |     |            |
|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
| Ser<br>145 | Thr | Glu | Lys | Ile | Lys<br>150 | Ala | Lys | Tyr | Pro | Asp<br>155 | Tyr | Glu | Val | Thr | Trp<br>160 |
|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|

|     |     |     |     |            |
|-----|-----|-----|-----|------------|
| Ala | Asn | Asp | Gly | Tyr<br>165 |
|-----|-----|-----|-----|------------|

<210> 110  
<400> 110  
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<210> 111  
<211> 33  
<212> PRT  
<213> homo sapiens

<400> 111

|          |     |     |     |          |     |     |     |     |           |     |     |     |     |           |     |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Pro<br>1 | Ser | Ser | Pro | Ser<br>5 | Leu | Pro | Val | Leu | Arg<br>10 | Ala | Gly | Leu | Arg | Pro<br>15 | Phe |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

|     |     |     |           |     |     |     |     |           |     |     |     |     |           |     |     |
|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|
| Cys | Asp | Val | Leu<br>20 | Pro | Gly | Cys | Gly | Cys<br>25 | Val | Arg | Phe | Leu | Cys<br>30 | Ser | Cys |
|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|

Leu

<210> 112  
<211> 31  
<212> PRT  
<213> homo sapiens

<400> 112

|          |     |     |     |          |     |     |     |     |           |     |     |     |     |           |     |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Glu<br>1 | Thr | Cys | Ala | Gly<br>5 | Ala | Gly | Arg | Cys | Ala<br>10 | Ala | Asp | Gly | Gly | Asn<br>15 | Gly |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

|     |     |     |           |     |     |     |     |           |     |     |     |     |           |     |
|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Ser | Gly | Ser | Arg<br>20 | Val | Pro | Pro | Ala | Ser<br>25 | Arg | Cys | Cys | Ala | Leu<br>30 | Gly |
|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

<210> 113  
<211> 67  
<212> PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 113

|           |           |           |           |          |     |           |           |           |           |     |           |           |           |           |     |
|-----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Lys<br>1  | Arg       | Ala       | Gln       | Ala<br>5 | Pro | Ala       | Ala       | Ala       | Leu<br>10 | Gln | Met       | Ala       | Glu       | Met<br>15 | Asp |
| Pro       | Val       | Ala       | Glu<br>20 | Phe      | Pro | Gln       | Pro       | Pro<br>25 | Gly       | Ala | Ala       | Arg       | Trp<br>30 | Ala       | Glu |
| Ala       | Leu       | Leu<br>35 | Arg       | Cys      | Phe | Thr       | Trp<br>40 | Leu       | Arg       | Leu | Cys       | Gln<br>45 | Ile       | Ser       | Met |
| Phe       | Leu<br>50 | Ser       | Leu       | Lys      | Cys | Leu<br>55 | Asn       | Thr       | Arg       | Ser | Ser<br>60 | His       | Leu       | Gly       | Ala |
| His<br>65 | Cys       | Arg       |           |          |     |           |           |           |           |     |           |           |           |           |     |

&lt;210&gt; 114

&lt;211&gt; 246

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 114

|           |            |            |            |           |           |            |            |            |           |           |            |            |            |           |           |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Gly<br>1  | Cys        | Val        | Ala        | Gly<br>5  | Ser       | Ala        | Gly        | Leu        | Ser<br>10 | Arg       | Lys        | Ser        | Pro        | Trp<br>15 | Thr       |
| Glu       | Val        | Glu        | Thr<br>20  | Glu       | Thr       | Phe        | Leu        | Gly<br>25  | Ser       | Pro       | Arg        | Tyr        | Ser<br>30  | Arg       | Arg       |
| Val       | Arg        | Ser<br>35  | Cys        | Tyr       | Trp       | Leu        | Leu<br>40  | Gly        | Leu       | Met       | Ala        | Val<br>45  | Arg        | Ala       | Ser       |
| Phe       | Glu<br>50  | Asn        | Asn        | Cys       | Glu       | Ile<br>55  | Gly        | Cys        | Phe       | Ala       | Lys<br>60  | Leu        | Thr        | Asn       | Thr       |
| Tyr<br>65 | Cys        | Leu        | Val        | Ala       | Ile<br>70 | Gly        | Gly        | Ser        | Glu       | Asn<br>75 | Phe        | Tyr        | Ser        | Val       | Phe<br>80 |
| Glu       | Gly        | Glu        | Leu        | Ser<br>85 | Asp       | Thr        | Ile        | Pro        | Val<br>90 | Val       | His        | Ala        | Ser        | Ile<br>95 | Ala       |
| Gly       | Cys        | Arg        | Ile<br>100 | Ile       | Gly       | Arg        | Met        | Cys<br>105 | Val       | Gly       | Asn        | Arg        | His<br>110 | Gly       | Leu       |
| Leu       | Val        | Pro<br>115 | Asn        | Asn       | Thr       | Thr        | Asp<br>120 | Gln        | Glu       | Leu       | Gln        | His<br>125 | Ile        | Arg       | Asn       |
| Ser       | Leu<br>130 | Pro        | Asp        | Thr       | Val       | Gln<br>135 | Ile        | Arg        | Arg       | Val       | Glu<br>140 | Glu        | Arg        | Leu       | Ser       |
| Ala       | Leu        | Gly        | Asn        | Val       | Thr       | Thr        | Cys        | Asn        | Asp       | Tyr       | Val        | Ala        | Leu        | Val       | His       |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 145        |            |            |            |            | 150        |            |            |            |            |            | 155        |            |            |            | 160        |
| Pro        | Asp        | Leu        | Asp        | Arg<br>165 | Glu        | Thr        | Glu        | Glu        | Ile<br>170 | Leu        | Ala        | Asp        | Val        | Leu<br>175 | Lys        |
| Val        | Glu        | Val        | Phe<br>180 | Arg        | Gln        | Thr        | Val        | Ala<br>185 | Asp        | Gln        | Val        | Leu        | Val<br>190 | Gly        | Ser        |
| Tyr        | Cys        | Val<br>195 | Phe        | Ser        | Asn        | Gln        | Gly<br>200 | Gly        | Leu        | Val        | His        | Pro<br>205 | Lys        | Thr        | Ser        |
| Ile        | Glu<br>210 | Asp        | Gln        | Asp        | Glu        | Cys<br>215 | Leu        | Ser        | Phe        | Gln        | Val<br>220 | Pro        | Cys        | Cys        | Gly        |
| Asp<br>225 | Val        | Asn        | Glu        | Ala        | Leu<br>230 | Ser        | Asp        | Ser        | Trp        | Asp<br>235 | Val        | Tyr        | Asn        | Val        | Ser<br>240 |
| Phe        | Val        | Pro        | Glu        | Thr<br>245 | Thr        |            |            |            |            |            |            |            |            |            |            |

<210> 115  
 <400> 115  
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<210> 116  
 <211> 72  
 <212> PRT  
 <213> homo sapiens

<400> 116

|           |           |           |           |          |           |           |           |           |           |     |           |           |           |           |     |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Met<br>1  | Gly       | Tyr       | Asn       | Leu<br>5 | Ser       | Pro       | Gln       | Phe       | Thr<br>10 | Gln | Leu       | Leu       | Val       | Ser<br>15 | Arg |
| Tyr       | Cys       | Pro       | Arg<br>20 | Ser      | Ala       | Asn       | Pro       | Ala<br>25 | Met       | Gln | Leu       | Asp       | Arg<br>30 | Phe       | Ile |
| Gln       | Val       | Cys<br>35 | Thr       | Gln      | Leu       | Gln       | Val<br>40 | Leu       | Thr       | Glu | Ala       | Phe<br>45 | Arg       | Glu       | Lys |
| Asp       | Thr<br>50 | Ala       | Val       | Gln      | Gly       | Asn<br>55 | Ile       | Arg       | Leu       | Ser | Phe<br>60 | Glu       | Asp       | Phe       | Val |
| Thr<br>65 | Met       | Thr       | Ala       | Ser      | Arg<br>70 | Met       | Leu       |           |           |     |           |           |           |           |     |

<210> 117  
 <211> 35  
 <212> PRT  
 <213> homo sapiens

<400> 117

|          |     |     |     |          |     |     |     |     |           |     |     |     |     |           |     |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Glu<br>1 | His | Thr | His | Arg<br>5 | Cys | Ser | Asp | Gln | Leu<br>10 | Arg | Leu | Ala | Thr | Val<br>15 | Ser |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

Asn Ser Val Ala Ser Lys Arg Glu Val Tyr Leu Cys Pro Ala Ile Gly  
 20 25 30 39

His Leu Gly  
 35

<210> 118  
 <211> 40  
 <212> PRT  
 <213> homo sapiens

<400> 118

Ala Thr Leu Trp Leu Ala Lys Glu Lys Phe Ile Cys Ala Gln Pro Leu  
 1 5 10 15  
 Val Thr Leu Gly Asp Ala Pro Asp Ser Arg Gln Met Leu Val His Trp  
 20 25 30  
 Pro Ser Ser Ser Phe Leu Leu Lys  
 35 40

<210> 119  
 <211> 33  
 <212> PRT  
 <213> homo sapiens

<400> 119

Gln Lys Arg Ser Leu Phe Val Pro Ser His Trp Ser Pro Trp Val Met  
 1 5 10 15  
 His Gln Ile Ala Gly Arg Cys Trp Phe Ile Gly Leu Arg Pro Leu Ser  
 20 25 30

Ser

<210> 120  
 <211> 161  
 <212> PRT  
 <213> homo sapiens

<400> 120

Leu Ser Ser Ser Arg Ser Phe Ile Ser Thr Ser Trp Gly Ala Phe Val  
 1 5 10 15  
 Phe Phe Cys Leu Leu Ser Cys Gly Ser Leu Val Leu Ala Gly Phe Glu  
 20 25 30  
 Gly Ala Ser Thr Ser Met Ala Val Phe Ser Phe Trp Ala Ser Arg Ile  
 35 40 45  
 Cys Trp Arg Ser Phe Leu Arg Phe Phe Pro Asp Ser Val Met Leu Ala  
 50 55 60  
 Arg Ala Leu Asp Ala Arg Phe Leu Arg Trp Cys Arg Val Ile Ser Pro  
 65 70 75 80

|            |            |            |            |           |            |            |            |            |           |            |            |            |            |           |            |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Trp        | Ser        | Ile        | Thr        | Ala<br>85 | Pro        | Thr        | Thr        | Arg        | Cys<br>90 | Leu        | Arg        | Arg        | Arg        | Ser<br>95 | Arg        |
| Phe        | Asn        | Thr        | Arg<br>100 | Arg       | Arg        | Leu        | Asn        | Ser<br>105 | Phe       | Phe        | Phe        | Ser        | Ser<br>110 | Val       | Arg        |
| Gly        | Arg        | Leu<br>115 | Ile        | Phe       | Pro        | Pro        | Gly<br>120 | Ala        | Pro       | Ile        | Val        | Ala<br>125 | Ile        | Pro       | Leu        |
| Gln        | Phe<br>130 | Thr        | Val        | Arg       | Thr        | Ser<br>135 | Ala        | Gln        | Arg       | Arg        | Ile<br>140 | Arg        | Gly        | Leu       | Arg        |
| Pro<br>145 | Gly        | Leu        | Pro        | Arg       | Ala<br>150 | Asn        | Arg        | Asn        | Ser       | Gly<br>155 | Ala        | Gly        | Pro        | Arg       | Ala<br>160 |

Ile

<210> 121  
 <211> 49  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 121

|          |     |           |           |          |     |     |           |           |           |     |     |           |           |           |     |
|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Phe<br>1 | Phe | Gln       | Ser       | Ala<br>5 | Arg | Ala | Leu       | Leu       | Gln<br>10 | Met | Glu | Leu       | Thr       | Ala<br>15 | Arg |
| Glu      | Ala | Leu       | Leu<br>20 | Gln      | Ser | Phe | Phe       | Cys<br>25 | Thr       | Phe | Phe | Pro       | Pro<br>30 | Lys       | Asp |
| Ile      | Pro | Leu<br>35 | Gly       | Glu      | Val | Ser | Arg<br>40 | Pro       | Leu       | Gly | Arg | Arg<br>45 | Lys       | Ser       | Gly |

Glu

<210> 122  
 <211> 25  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 122

|          |     |     |           |          |     |     |     |           |           |     |     |     |     |           |     |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----|-----------|-----|
| Lys<br>1 | Gly | Ala | Leu       | Leu<br>5 | Leu | Ser | Lys | Ser       | Ser<br>10 | Glu | Thr | Thr | Thr | Glu<br>15 | Ser |
| Glu      | Gly | Trp | Leu<br>20 | Gln      | Leu | Arg | Ile | Phe<br>25 |           |     |     |     |     |           |     |

<210> 123  
 <211> 25  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 123

|          |     |     |     |          |     |     |     |     |           |     |     |     |     |           |     |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Trp<br>1 | Lys | Arg | Phe | Ser<br>5 | Ser | His | Leu | Gln | Gly<br>10 | Pro | Ser | Phe | Leu | His<br>15 | Pro |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|



Gly Gly Leu Leu Ser Ser Phe Ala Phe  
20 25

<210> 124  
<211> 160  
<212> PRT  
<213> homo sapiens

<400> 124

|            |            |            |            |           |            |            |            |            |           |            |            |            |            |           |            |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Trp<br>1   | Leu        | Leu        | Gln        | Leu<br>5  | Lys        | Pro        | His        | Leu        | Leu<br>10 | Ala        | His        | His        | Pro        | Pro<br>15 | Lys        |
| Gly        | Leu        | Pro        | His<br>20  | Arg       | Gly        | Ala        | Pro        | Leu<br>25  | Tyr       | Ser        | Pro        | Arg        | Thr<br>30  | Arg       | Pro        |
| Arg        | Val        | Ala<br>35  | Ile        | Gly       | Pro        | Arg        | Lys<br>40  | Ala        | Gly       | Ala        | Glu        | Pro<br>45  | Ala        | Asp       | Pro        |
| Ala        | Leu<br>50  | Ser        | Gly        | Ser       | Thr        | Asp<br>55  | Arg        | Glu        | Leu       | Glu        | Trp<br>60  | Asn        | Arg        | Asp       | Tyr        |
| Gly<br>65  | Ser        | Ser        | Gly        | Gly       | Lys<br>70  | Asp        | Gln        | Pro        | Ala       | Pro<br>75  | Asn        | Gly        | Ala        | Glu       | Glu<br>80  |
| Glu        | Ala        | Val        | Gln        | Thr<br>85 | Pro        | Ala        | Gly        | Val        | Glu<br>90 | Ser        | Gly        | Ala        | Ala        | Ser<br>95 | Glu        |
| Ala        | Pro        | Gly        | Gly<br>100 | Arg       | Gly        | Cys        | Asp        | Arg<br>105 | Pro       | Arg        | Ala        | Asp        | His<br>110 | Ala       | Ala        |
| Pro        | Pro        | Gln<br>115 | Glu        | Ala       | Gly        | Val        | Gln<br>120 | Cys        | Thr       | Cys        | Gln        | His<br>125 | Tyr        | Thr       | Val        |
| Arg        | Glu<br>130 | Glu        | Ala        | Gln       | Lys        | Thr<br>135 | Pro        | Pro        | Ala       | Asp        | Pro<br>140 | Ala        | Cys        | Pro       | Glu        |
| Arg<br>145 | Glu        | Asp        | Ser        | His       | Gly<br>150 | Ser        | Gly        | Ser        | Pro       | Phe<br>155 | Lys        | Ala        | Ser        | Gln       | Asp<br>160 |

<210> 125  
<400> 125  
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<210> 126  
<400> 126  
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<210> 127  
<400> 127  
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<210> 128  
<211> 78

<212> PRT  
 <213> homo sapiens

<400> 123

|           |           |           |           |          |           |           |           |           |           |           |           |           |           |           |     |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| Phe<br>1  | Phe       | Phe       | Pro       | Cys<br>5 | Gln       | Pro       | Phe       | Ile       | Gly<br>10 | Ser       | Gly       | Thr       | His       | Glu<br>15 | Val |
| Gln       | Leu       | Val       | Pro<br>20 | Gly      | Thr       | Val       | His       | Ser<br>25 | Leu       | Lys       | Gln       | Leu       | Lys<br>30 | Gly       | Leu |
| Ser       | Pro       | Asp<br>35 | Thr       | Asp      | Ala       | Thr       | Leu<br>40 | Ser       | Arg       | Met       | His       | Gly<br>45 | Pro       | Gly       | Leu |
| Thr       | Leu<br>50 | Ser       | Met       | Glu      | Glu       | Val<br>55 | Gly       | Ser       | Ala       | Arg       | Gly<br>60 | Gly       | Arg       | Met       | Val |
| Ala<br>65 | Arg       | Asp       | Thr       | Glu      | Ser<br>70 | Leu       | Val       | Leu       | Gly       | Leu<br>75 | Trp       | Leu       | Ser       |           |     |

<210> 129  
 <211> 109  
 <212> PRT  
 <213> homo sapiens

<400> 129

|           |           |           |            |           |           |           |           |            |           |           |           |           |           |           |           |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Cys<br>1  | Ala       | Leu       | Leu        | Pro<br>5  | Pro       | Thr       | Pro       | Ser        | Arg<br>10 | Thr       | Glu       | Pro       | Ser       | Leu<br>15 | His       |
| Ser       | Thr       | Gly       | Asp<br>20  | Ser       | Gly       | Lys       | Gly       | Ala<br>25  | Glu       | Asp       | Arg       | Gln       | Glu<br>30 | Ala       | His       |
| Arg       | Asp       | Arg<br>35 | Pro        | Thr       | Gly       | Ser       | Gln<br>40 | Ala        | Ala       | Pro       | Glu       | Glu<br>45 | Arg       | Asp       | Ile       |
| Gln       | Thr<br>50 | Glu       | Glu        | Ser       | Leu       | Pro<br>55 | Ala       | Pro        | His       | Ser       | Phe<br>60 | Gln       | Asp       | Glu       | Lys       |
| Asn<br>65 | Leu       | Pro       | Pro        | Pro       | Pro<br>70 | Asp       | Thr       | Asp        | Ala       | Arg<br>75 | Glu       | Val       | Gly       | Gly       | Arg<br>80 |
| Ser       | Gly       | Lys       | Phe        | Pro<br>85 | Phe       | Pro       | Val       | Pro        | Pro<br>90 | Arg       | Thr       | Ser       | Glu       | Pro<br>95 | Ser       |
| Met       | Leu       | Asn       | Phe<br>100 | Phe       | Phe       | Ile       | Lys       | Ile<br>105 | Thr       | Phe       | Ile       | Leu       |           |           |           |

<210> 130  
 <211> 102  
 <212> PRT  
 <213> homo sapiens

<400> 130

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Pro | Ala | Asp | Val | Pro | Cys | Cys | Pro | Pro | Pro | His | Pro | Ala | Gln |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|           |           |           |            |           |           |           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1         |           |           |            | 5         |           |           | 43        |           | 10        |           |           |           | 15        |           |           |
| Asn       | His       | Pro       | Cys<br>20  | Ile       | Pro       | Gln       | Gly       | Thr<br>25 | Arg       | Ala       | Arg       | Val       | Pro<br>30 | Lys       | Ile       |
| Asp       | Lys       | Arg<br>35 | His        | Thr       | Glu       | Thr       | Asp<br>40 | Gln       | Leu       | Ala       | Ala       | Arg<br>45 | Gln       | Pro       | Gln       |
| Arg       | Arg<br>50 | Glu       | Thr        | Phe       | Arg       | Gln<br>55 | Arg       | Lys       | Val       | Ser       | Leu<br>60 | Pro       | Leu       | Ile       | Pro       |
| Ser<br>65 | Lys       | Met       | Arg        | Lys       | Thr<br>70 | Cys       | Arg       | His       | Pro       | Pro<br>75 | Thr       | Leu       | Met       | Pro       | Gly<br>80 |
| Arg       | Trp       | Glu       | Glu        | Glu<br>85 | Val       | Gly       | Asn       | Phe       | Pro<br>90 | Ser       | Gln       | Tyr       | Pro       | Gln<br>95 | Glu       |
| Arg       | Leu       | Ser       | Leu<br>100 | Gln       | Cys       |           |           |           |           |           |           |           |           |           |           |

<210> 131  
 <211> 31  
 <212> PRT  
 <213> homo sapiens

<400> 131

|          |     |     |           |          |     |     |     |           |           |     |     |     |           |           |     |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Leu<br>1 | Cys | Gln | Leu       | Met<br>5 | Cys | Pro | Val | Ala       | Pro<br>10 | His | Pro | Ile | Pro       | His<br>15 | Arg |
| Thr      | Ile | Pro | Ala<br>20 | Phe      | His | Arg | Gly | Leu<br>25 | Gly       | Gln | Gly | Cys | Arg<br>30 | Arg       |     |

<210> 132  
 <211> 166  
 <212> PRT  
 <213> homo sapiens

<400> 132

|           |           |           |           |          |           |           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Gly<br>1  | Phe       | Arg       | Pro       | Ala<br>5 | Arg       | Cys       | Asp       | Pro       | Val<br>10 | Pro       | Leu       | Pro       | Thr       | Thr<br>15 | Arg       |
| Ser       | Val       | Ala       | Gly<br>20 | Leu      | Pro       | Val       | Gly       | Arg<br>25 | Val       | Arg       | Gln       | Leu       | Ser<br>30 | Arg       | Pro       |
| Leu       | Leu       | Gly<br>35 | Pro       | Asp      | Thr       | Gly       | Ser<br>40 | Val       | Ala       | Asn       | Ile       | Phe<br>45 | Lys       | Gly       | Leu       |
| Val       | Ile<br>50 | Leu       | Pro       | Glu      | Met       | Ser<br>55 | Leu       | Val       | Ile       | Arg       | Asn<br>60 | Leu       | Gln       | Arg       | Val       |
| Ile<br>65 | Pro       | Ile       | Arg       | Arg      | Ala<br>70 | Pro       | Leu       | Arg       | Ser       | Lys<br>75 | Ile       | Glu       | Ile       | Val       | Arg<br>80 |
| Arg       | Ile       | Leu       | Gly       | Val      | Gln       | Lys       | Phe       | Asp       | Leu       | Gly       | Ile       | Ile       | Cys       | Val       | Asp       |

|            |            |            |            |            |            |            |            |            |     |            |            |            |            |     |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|------------|
| Asn        | Lys        | Asn        | Ile<br>100 | Gln        | His        | Ile        | Asn        | Arg<br>105 | Ile | Tyr        | Arg        | Asp        | Arg<br>110 | Asn | Val        |
| Pro        | Thr        | Asp<br>115 | Val        | Leu        | Ser        | Phe        | Pro<br>120 | Phe        | His | Glu        | His        | Leu<br>125 | Lys        | Ala | Gly        |
| Glu        | Phe<br>130 | Pro        | Gln        | Pro        | Asp        | Phe<br>135 | Pro        | Asp        | Asp | Tyr        | Asn<br>140 | Leu        | Gly        | Asp | Ile        |
| Phe<br>145 | Leu        | Gly        | Val        | Glu        | Tyr<br>150 | Ile        | Phe        | His        | Gln | Cys<br>155 | Arg        | Glu        | Asp        | Glu | Asp<br>160 |
| Tyr        | Asn        | Asp        | Val        | Leu<br>165 | Thr        |            |            |            |     |            |            |            |            |     |            |

&lt;210&gt; 133

&lt;211&gt; 244

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 133

|           |            |            |            |           |           |            |            |            |           |           |            |            |            |           |           |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Phe<br>1  | Asp        | Pro        | Lys        | Leu<br>5  | Leu       | Glu        | Gly        | Lys        | Val<br>10 | Lys       | Glu        | Asp        | Pro        | Asp<br>15 | Gln       |
| Gly       | Glu        | Ser        | Met<br>20  | Lys       | Pro       | Leu        | Thr        | Phe<br>25  | Ala       | Arg       | Phe        | Tyr        | Leu<br>30  | Pro       | Ile       |
| Leu       | Val        | Pro<br>35  | Ser        | Ala       | Lys       | Lys        | Ala<br>40  | Ile        | Tyr       | Met       | Asp        | Asp<br>45  | Asp        | Val       | Ile       |
| Val       | Gln<br>50  | Gly        | Asp        | Ile       | Leu       | Ala<br>55  | Leu        | Tyr        | Asn       | Thr       | Ala<br>60  | Leu        | Lys        | Pro       | Gly       |
| His<br>65 | Ala        | Ala        | Ala        | Phe       | Ser<br>70 | Glu        | Asp        | Cys        | Asp       | Ser<br>75 | Ala        | Ser        | Thr        | Lys       | Val<br>80 |
| Val       | Ile        | Arg        | Gly        | Ala<br>85 | Gly       | Asn        | Gln        | Tyr        | Asn<br>90 | Tyr       | Ile        | Gly        | Tyr        | Leu<br>95 | Asp       |
| Tyr       | Lys        | Lys        | Glu<br>100 | Arg       | Ile       | Arg        | Lys        | Leu<br>105 | Ser       | Met       | Lys        | Ala        | Ser<br>110 | Thr       | Cys       |
| Ser       | Phe        | Asn<br>115 | Pro        | Gly       | Val       | Phe        | Val<br>120 | Ala        | Asn       | Leu       | Thr        | Glu<br>125 | Trp        | Lys       | Arg       |
| Gln       | Asn<br>130 | Ile        | Thr        | Asn       | Gln       | Leu<br>135 | Glu        | Lys        | Trp       | Met       | Lys<br>140 | Leu        | Asn        | Val       | Glu       |
| Glu       | Gly        | Leu        | Tyr        | Ser       | Arg       | Thr        | Leu        | Ala        | Gly       | Ser       | Ile        | Thr        | Thr        | Pro       | Pro       |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 145        |            |            |            |            | 150        |            |            |            |            | 155        |            |            |            |            | 160        |
| Leu        | Leu        | Ile        | Val        | Phe<br>165 | Tyr        | Gln        | Gln        | His        | Ser<br>170 | Thr        | Ile        | Asp        | Pro        | Met<br>175 | Trp        |
| Asn        | Val        | Arg        | His<br>180 | Leu        | Gly        | Ser        | Ser        | Ala<br>185 | Gly        | Lys        | Arg        | Tyr        | Ser<br>190 | Pro        | Gln        |
| Phe        | Val        | Lys<br>195 | Ala        | Ala        | Lys        | Leu        | Leu<br>200 | His        | Trp        | Asn        | Gly        | His<br>205 | Leu        | Lys        | Pro        |
| Trp        | Gly<br>210 | Arg        | Thr        | Ala        | Ser        | Tyr<br>215 | Thr        | Asp        | Val        | Trp        | Glu<br>220 | Lys        | Trp        | Tyr        | Ile        |
| Pro<br>225 | Asp        | Pro        | Thr        | Gly        | Lys<br>230 | Phe        | Asn        | Leu        | Ile        | Arg<br>235 | Arg        | Tyr        | Thr        | Glu        | Ile<br>240 |
| Ser        | Asn        | Ile        | Lys        |            |            |            |            |            |            |            |            |            |            |            |            |

<210> 134  
 <211> 63  
 <212> PRT  
 <213> homo sapiens  
 <400> 134

|          |           |           |           |          |     |           |           |           |           |     |           |           |           |           |     |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Pro<br>1 | Ser       | Phe       | Ile       | Ile<br>5 | His | Ser       | Asn       | Pro       | Ile<br>10 | Trp | Leu       | Gly       | Ala       | Leu<br>15 | Leu |
| Trp      | Val       | Ser       | His<br>20 | Cys      | Pro | Ser       | Ser       | Ile<br>25 | Leu       | Gly | Ser       | Leu       | Arg<br>30 | Pro       | Arg |
| Gly      | Gly       | Lys<br>35 | Ile       | Gln      | Leu | Arg       | Val<br>40 | Gly       | Gly       | Ser | Glu       | Pro<br>45 | Cys       | Arg       | Ile |
| Met      | Lys<br>50 | Ala       | Thr       | Cys      | Phe | Gly<br>55 | Asn       | Asp       | Leu       | Pro | Leu<br>60 | Pro       | Val       | Val       |     |

<210> 135  
 <211> 69  
 <212> PRT  
 <213> homo sapiens  
 <400> 135

|          |     |           |           |          |     |     |           |           |           |     |     |           |           |           |     |
|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Asp<br>1 | Tyr | Leu       | Arg       | Leu<br>5 | Ser | Ser | Gly       | Phe       | Cys<br>10 | Gln | Asn | Thr       | Pro       | Leu<br>15 | Thr |
| Glu      | Ser | Thr       | Glu<br>20 | Gly      | Met | Gly | Val       | Gly<br>25 | Gly       | Leu | Gly | Arg       | Val<br>30 | Arg       | Leu |
| Glu      | Cys | Glu<br>35 | Gly       | Ser      | Leu | Ile | Tyr<br>40 | Ala       | Glu       | Leu | Lys | Ser<br>45 | Pro       | Ser       | Leu |
| Tyr      | Val | His       | Thr       | Phe      | Val | Leu | Phe       | Ser       | Arg       | Leu | Ile | Leu       | Ala       | Ile       | Pro |

50

55

46

60

Asn Pro Leu Pro Arg  
65

<210> 136  
<211> 47  
<212> PRT  
<213> homo sapiens

<400> 136

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Pro | Phe | Arg | Tyr | Phe | Asn | Thr | Pro | Leu | Ser | Ile | Leu | His | Phe | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| His | Leu | Ser | Lys | Leu | Asn | Leu | Val | His | Arg | Val | Gly | Leu | Cys | Met | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Met | Gln | Glu | Val | Gly | Val | Asp | Ser | Ala | Leu | Gly | Trp | Asn | Pro | Pro |     |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

<210> 137  
<211> 83  
<212> PRT  
<213> homo sapiens

<400> 137

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Pro | Cys | Pro | Gln | Leu | Arg | Glu | Leu | Cys | Pro | Gly | Val | Asn | Asn |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gln | Pro | Tyr | Leu | Cys | Glu | Ser | Gly | His | Cys | Cys | Gly | Glu | Thr | Gly | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Cys | Thr | Tyr | Tyr | Tyr | Glu | Leu | Trp | Trp | Phe | Trp | Leu | Leu | Trp | Thr | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Ile | Leu | Phe | Ser | Cys | Cys | Cys | Ala | Phe | Arg | His | Arg | Arg | Ala | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Arg | Leu | Gln | Gln | Gln | Gln | Arg | His | Val | Glu | Ile | Asn | Leu | Leu | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

Tyr His Gly

<210> 138  
<400> 138  
000

<210> 139  
<211> 88  
<212> PRT  
<213> homo sapiens

<400> 139

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Lys | Ser | Trp | Gln | Leu | His | Arg | Met | Leu | Leu | Thr | Arg | Thr | Glu | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

Trp Tyr Leu Ser Thr Glu Val Ser Thr Met Phe Thr Cys Lys Arg Leu  
20 25 30

Arg Lys Lys Pro Leu Lys Trp Thr Gly Ile Gln Ser Ser Phe Ser Val  
35 40 45

Thr His Gln Ser Asp Lys Arg Leu Val Thr Thr Leu Pro Gly Leu Phe  
50 55 60

Ser Phe Tyr Asn Ser Ser Ser Ile His Asn Asp Phe Val Leu Cys Ser  
65 70 75 80

Ile Phe Phe Asn Pro Leu Ser Ile  
85

<210> 140

<211> 21

<212> PRT

<213> homo sapiens

<400> 140

Cys Tyr Met His Phe Leu Thr Phe Val Lys Asn Val Thr Ile Val Lys  
1 5 10 15

Lys Cys Thr Lys Met  
20

<210> 141

<211> 58

<212> PRT

<213> homo sapiens

<400> 141

Met Glu Ile Glu Gln Val His Phe Pro Ala Tyr Arg Gln Leu Tyr Thr  
1 5 10 15

Asp Leu Asn Ile Phe Ser Ser Cys Leu Val Lys Val Lys Glu Lys Gly  
20 25 30

Phe Phe Leu Pro Gln Asp Ile Thr Phe Phe Tyr Ile Thr Ser Ile Thr  
35 40 45

His His Cys Phe Trp Trp Lys Ser Ala Glu  
50 55

<210> 142

<211> 21

<212> PRT

<213> homo sapiens

<400> 142

Asn Ser Phe Leu Thr Gln Met Met Val Leu Gln Asn Asn Lys Met Ala  
1 5 10 15

Glu His Phe His Lys

20

<210> 143  
 <211> 44  
 <212> PRT  
 <213> homo sapiens

<400> 143

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Thr | Lys | Ser | Gly | Phe | Leu | Ile | Pro | Cys | His | Leu | Gly | Asp | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Leu | Leu | Cys | Cys | Phe | Lys | Ile | Gln | Cys | Arg | Glu | Val | Val | Asp | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Gly | Asn | Lys | Val | Asn | Ser | Asn | Phe | Glu | Lys | Lys |     |     |     |     |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |     |     |     |     |

<210> 144  
 <211> 67  
 <212> PRT  
 <213> homo sapiens

<400> 144

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Pro | Pro | Asn | Asp | Lys | Val | Ser | Glu | Ile | Gln | Thr | Ser | Leu | His | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Cys | Glu | Asn | Val | Gln | Pro | Phe | Tyr | Cys | Ser | Val | Lys | Glu | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Gly | Ser | Lys | Met | Asn | Ser | Ile | Asn | Gln | Arg | Ile | Phe | Tyr | Thr | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Lys | Lys | Ile | Ser | Ser | Asn | Ile | Leu | Thr | Glu | Tyr | Cys | Lys | Leu | His |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Phe | Ser | Ser |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 65  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 145  
 <211> 65  
 <212> PRT  
 <213> homo sapiens

<400> 145

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Val | His | Thr | Ile | Leu | His | Phe | Ser | Thr | Lys | Ser | Ser | Gly | Val | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Cys | Leu | Leu | Tyr | Lys | Lys | Lys | Leu | Tyr | Pro | Val | Ala | Gly | Lys | Thr | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Leu | Ser | Leu | Leu | Leu | Asn | Asn | Trp | Arg | Lys | Cys | Ser | Ser | Leu | Tyr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | Val | Ala | Tyr | Lys | Leu | Glu | Ser | Glu | Leu | Val | Gln | Ser | Pro | Phe | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |



Phe  
55

<210> 146  
<211> 55  
<212> PRT  
<213> homo sapiens

<400> 146

|          |           |           |           |          |     |           |           |           |           |     |     |           |           |           |     |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Lys<br>1 | Ile       | Trp       | Ser       | Arg<br>5 | Glu | Gln       | Asn       | His       | Cys<br>10 | Glu | Trp | Met       | Asn       | Cys<br>15 | Cys |
| Lys      | Met       | Lys       | Lys<br>20 | Val      | Gln | Ala       | Lys       | Leu<br>25 | Leu       | Gln | Val | Phe       | Cys<br>30 | His       | Phe |
| Asp      | Glu       | Ser<br>35 | Gln       | Lys      | Met | Asn       | Phe<br>40 | Gly       | Tyr       | Leu | Ser | Thr<br>45 | Leu       | Arg       | Val |
| Phe      | Ser<br>50 | Leu       | Ile       | Phe      | Cys | Met<br>55 |           |           |           |     |     |           |           |           |     |

<210> 147  
<211> 113  
<212> PRT  
<213> homo sapiens

<400> 147

|           |           |           |            |           |           |           |           |            |           |           |           |           |            |           |           |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Ile<br>1  | Pro       | Glu       | Asp        | Pro<br>5  | His       | Ile       | Asp       | Glu        | Ser<br>10 | Lys       | Ala       | Lys       | His        | Gln<br>15 | Ala       |
| Ile       | Ile       | Met       | Ser<br>20  | Thr       | Ser       | Leu       | Arg       | Val<br>25  | Ser       | Pro       | Ser       | Ile       | His<br>30  | Gly       | Tyr       |
| His       | Phe       | Asp<br>35 | Thr        | Ala       | Ser       | Arg       | Lys<br>40 | Lys        | Ala       | Val       | Gly       | Asn<br>45 | Ile        | Phe       | Glu       |
| Asn       | Thr<br>50 | Asp       | Gln        | Glu       | Ser       | Leu<br>55 | Glu       | Arg        | Leu       | Phe       | Arg<br>60 | Asn       | Ser        | Gly       | Asp       |
| Lys<br>65 | Lys       | Ala       | Glu        | Glu       | Arg<br>70 | Ala       | Lys       | Ile        | Ile       | Phe<br>75 | Ala       | Ile       | Asp        | Gln       | Asp<br>80 |
| Val       | Glu       | Glu       | Lys        | Thr<br>85 | Arg       | Ala       | Leu       | Met        | Ala<br>90 | Leu       | Lys       | Lys       | Arg        | Thr<br>95 | Lys       |
| Asp       | Lys       | Leu       | Phe<br>100 | Gln       | Phe       | Leu       | Lys       | Leu<br>105 | Arg       | Lys       | Tyr       | Ser       | Ile<br>110 | Lys       | Val       |

His

<210> 148  
<211> 88  
<212> PRT  
<213> homo sapiens



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<211> 134
<212> PRT
<213> homo sapiens
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[illegible]



<210> 155  
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<400> 155

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Leu | Leu | Gln | Lys | Ile | Gly | Gly | Ile | Phe | Thr | Phe | Ile | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | Leu | Ser | Asn | Phe | Ser | Thr | His | Ile |     |     |     |     |     |     |     |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     |     |     |

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<400> 156

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Cys | Asn | Val | Arg | Leu | Glu | Lys | Ile | Trp | Tyr | Leu | Gly | Tyr | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gln | Gly | Thr | Ile | Lys | Ser | Asp | Phe | Cys | Phe | Phe | Val | Lys | Lys | Asn | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Asn | Gln | Tyr | Cys | Phe | Tyr | Lys |     |     |     |     |     |     |     |     |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |     |     |     |     |

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 <213> homo sapiens

<400> 157

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ala | Asn | Tyr | Cys | Ile | His | His | Lys | Leu | Lys | Lys | Arg | Thr | Cys | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Arg | Leu | Lys | Thr | Arg | Lys | Lys | Ile | Gln | His | Pro | Asn | Met | Tyr | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Glu | Gly | Asn | Gln | Phe | Cys | Asn | Arg | Thr | Gly | Ile | Met | Asn | Tyr | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln | Glu | Gly | Val | Glu | Lys | Glu | Glu | Lys | Lys | Met | Cys | Ile | Glu | Phe | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | Leu |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 65  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

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<400> 158

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Cys | Cys | Glu | Val | Leu | Ala | Gly | Val | Gly | Asn | Val | Trp | Lys | Cys | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

Gln Gln Val Cys Trp Gly Val  
20

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<212> PRT  
<213> homo sapiens

<400> 159

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Val | Lys | Ser | Trp | Gln | Val | Leu | Val | Met | Cys | Gly | Asn | Ala | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Lys | Phe | Ala | Gly | Glu | Phe | Asp | Lys | Ser | Ile | Lys | Gln | Asn | Lys | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Leu | Gly | Ile | Ile | Leu | Phe | His | Asp | Phe | Phe | Cys | Ser | Phe | Thr | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Gly | Arg | Asn | Gly | Leu | Gln | Gln | Val | Val | Glu | Glu | Glu | Gly | Gly | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Val | Tyr |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 65  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

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<212> PRT  
<213> homo sapiens

<400> 160

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gly | Glu | Pro | Ala | Cys | Ser | Gly | Ile | Gln | Ala | Arg | Arg | Val | Thr | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Cys | Pro | Ser | Pro | Arg | Asp | Ala | Ser | Pro | Ala | Pro | Ala | Ser | Glu | Thr | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Ser | Val | Pro | Ala | Thr | Leu | Val | Gly | Gly | Ser | Asp | Leu | Ile | His | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln | Val | Gly | Ser | Gly | Pro | Thr | Pro | Gly | Pro | Ala | Glu | Asp | Arg | Ala | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Pro | Ser | Trp | Leu | Thr | Leu | Gln | Leu | Ala | Leu | Gly | Trp | Gly | Gly | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Glu | Leu | Met | Ser | Val | Ala | Ser | Leu | Ser | Trp | Gly | Phe | Pro | Ala | Cys | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Val | Val | Ser | Cys | Pro | Arg | Cys | Tyr | Arg | Gly | Cys | Ala |     |     |     |     |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     |     |     |

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<212> PRT

<213> homo sapiens

<400> 161

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Cys | Ser | Thr | Thr | Ser | Ser | Val | Ala | Leu | His | Gln | Lys | Glu | Gly | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |
|-----|-----|-----|-----|
| Gly | Tyr | Ser | Arg |
|     |     |     | 20  |

<210> 162

<211> 61

<212> PRT

<213> homo sapiens

<400> 162

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Pro | Gly | Leu | Lys | Tyr | Phe | Val | Gly | Ile | Ala | Tyr | Tyr | Ile | Ile | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Glu | Pro | Gln | Asp | Asn | Gly | Tyr | Arg | His | Thr | His | Thr | Tyr | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Thr | Lys | Ser | Gln | Leu | Leu | Lys | Ser | Gly | Leu | Gly | Ile | Arg | Leu | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Pro | Val | Lys | Asn | Ser | Cys | Thr | Glu | Val | Ile | Val | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |

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<211> 22

<212> PRT

<213> homo sapiens

<400> 163

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Met | Asn | Leu | Arg | Thr | Thr | Ala | Thr | Asp | Thr | His | Ile | His | Thr | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Thr | Gln | Asn | Leu | Ser | Cys |
|     |     |     | 20  |     |     |

<210> 164

<211> 37

<212> PRT

<213> homo sapiens

<400> 164

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Gly | Gln | Arg | Leu | Gln | Thr | His | Thr | Tyr | Ile | His | Ala | His | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Ala | Val | Glu | Glu | Trp | Ala | Trp | Asn | Gln | Thr | Ser | Val | Ser | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Lys | Lys | Leu | Leu | His |
|     |     | 35  |     |     |

<210> 165

<211> 72

<212> PRT

<213> homo sapiens

&lt;400&gt; 165

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Val | Pro | Phe | Ser | Val | Ser | Ala | Ser | Gly | Phe | His | Leu | Ile | Phe | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Leu | Pro | Ile | Leu | Phe | Gln | Pro | Val | Ala | Lys | Asn | His | Glu | Thr | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Trp | Lys | His | Arg | His | Arg | Arg | Arg | Gly | Pro | Ser | Cys | Ala | Leu | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Gly | Lys | Thr | Ala | Ser | Gly | Ala | Gly | Glu | Val | Val | Arg | Cys | Leu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Glu | Gln | Ser | Val | Ala | Ile | Ser | Arg |     |     |     |     |     |     |     |     |
| 65  |     |     |     |     | 70  |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 166

&lt;400&gt; 166

000

&lt;210&gt; 167

&lt;400&gt; 167

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&lt;210&gt; 168

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 168

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ile | Ser | Thr | Ser | Glu | Glu | Val | Leu | Thr | Phe | Ser | Met | Leu | His | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asn | Trp | Tyr | Asn | Met | Pro | Ser | Val | Tyr |     |     |     |     |     |     |     |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     |     |     |

&lt;210&gt; 169

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 169

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Leu | Leu | Ala | Trp | Ser | Tyr | Leu | His | Ser | Phe | Cys | Val | Leu | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Ser | Cys | Ile |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 20  |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 170

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 170

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Ala | Cys | Cys | Thr | Glu | Thr | Gly | Ile | Thr | Cys | Leu | Gln | Tyr | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Thr | His | Met | Leu | Ser | Phe | Val | Leu | Phe | Trp | Gln | Leu | Thr | Arg | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

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 <212> PRT  
 <213> homo sapiens

<400> 171

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Leu | Ser | Cys | Cys | Phe | Asn | Val | Val | His | Thr | Ile | Ala | Ser | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Thr | Cys | Tyr | Ser | Ser | Val | Ile | Cys | Ser | Val | Val | Thr | Lys | Val | Thr | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Val | Leu | Phe | Ala | Gln | Phe | Leu | Arg | Leu | Val | Cys | Phe | Leu | His | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ile | Asn |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|     | 50  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

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 <213> homo sapiens

<400> 172

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | His | Tyr | Thr | Ile | Gly | Phe | Gln | Tyr | Cys | Thr | His | Lys | Ile | His | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Cys | Val | Gln | Lys | Val | Ser | Ser | Ser | Arg | Leu | Val | Ile | Pro | Phe | Thr | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Ile | Asn | Glu | Gly | Asn | Leu | Tyr | Ile | Leu | Tyr | Lys | Asn | Lys | Ser | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Ile | Tyr |     |     |     |     |     |     |     |     |     |     |     |     |     |
|     | 50  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

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 <213> homo sapiens

<400> 173

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Ile | His | Phe | Arg | Asn | Asn | Thr | Asn | Asn | Trp | Arg | Glu | Ile | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Asn | Leu | Met | Asp | Gln | Tyr | Ser | Glu | Val | Asn | Ala | Ile | Ser | Thr | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Cys | Ser | Asn | Gly | Val | Pro | Glu | Cys | Glu | Glu | Met | Val | Ser | Gly | Leu | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |



57

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Lys        | Gln<br>50  | Trp        | Met        | Glu        | Asn        | Pro<br>55  | Asn        | Asn        | Asn        | Pro        | Ile<br>60  | His        | Pro        | Asn        | Leu        |
| Arg<br>65  | Ser        | Thr        | Val        | Tyr        | Cys<br>70  | Asn        | Ala        | Ile        | Ala        | Gln<br>75  | Gly        | Gly        | Glu        | Glu        | Glu<br>80  |
| Trp        | Asp        | Phe        | Ala        | Trp<br>85  | Glu        | Gln        | Phe        | Arg        | Asn<br>90  | Ala        | Thr        | Leu        | Val        | Asn<br>95  | Glu        |
| Ala        | Asp        | Lys        | Leu<br>100 | Arg        | Ala        | Ala        | Leu        | Ala<br>105 | Cys        | Ser        | Lys        | Glu        | Leu<br>110 | Trp        | Ile        |
| Leu        | Asn        | Arg<br>115 | Tyr        | Leu        | Ser        | Tyr        | Thr<br>120 | Leu        | Asn        | Pro        | Asp        | Leu<br>125 | Ile        | Arg        | Lys        |
| Gln        | Asp<br>130 | Ala        | Thr        | Ser        | Thr        | Ile<br>135 | Ile        | Ser        | Ile        | Thr        | Asn<br>140 | Asn        | Val        | Ile        | Gly        |
| Gln<br>145 | Gly        | Leu        | Val        | Trp        | Asp<br>150 | Phe        | Val        | Gln        | Ser        | Asn<br>155 | Trp        | Lys        | Lys        | Leu        | Phe<br>160 |
| Asn        | Asp        | Tyr        | Gly        | Gly<br>165 | Gly        | Ser        | Phe        | Ser        | Phe<br>170 | Ser        | Asn        | Leu        | Ile        | Gln<br>175 | Ala        |
| Val        | Thr        | Arg        | Arg<br>180 | Phe        | Ser        | Thr        | Glu        | Tyr<br>185 | Glu        | Leu        | Gln        | Gln        | Leu<br>190 | Glu        | Gln        |
| Phe        | Lys        | Lys<br>195 | Asp        | Asn        | Glu        | Glu        | Thr<br>200 | Gly        | Phe        | Gly        | Ser        | Gly<br>205 | Thr        | Arg        | Ala        |
| Leu        | Glu<br>210 | Gln        | Ala        | Leu        | Glu        | Lys<br>215 | Thr        | Lys        | Ala        | Asn        | Ile<br>220 | Lys        | Trp        | Val        | Lys        |
| Glu<br>225 | Asn        | Lys        | Glu        | Val        | Val<br>230 | Leu        | Gln        | Trp        | Phe        | Thr<br>235 | Glu        | Asn        | Ser        | Lys        |            |

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<210> 175  
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<210> 176  
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<210> 178  
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&lt;400&gt; 179

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&lt;210&gt; 180

&lt;400&gt; 180

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&lt;210&gt; 181

&lt;400&gt; 181

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&lt;210&gt; 182

&lt;400&gt; 182

000

&lt;210&gt; 183

&lt;211&gt; 109

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 183

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ala | Asn | Gln | Ser | Ser | Ser | Leu | Arg | Phe | Lys | Ile | Lys | Tyr | Lys | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Cys | Phe | Ser | Thr | His | Ser | Gly | Ser | Ile | Val | Pro | Glu | Pro | Asp | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Tyr | Phe | Phe | Ile | Leu | Asn | Ile | Ile | Phe | Pro | His | Leu | Ile | Cys | Leu | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Ile | His | Arg | His | Leu | Glu | Lys | Glu | Met | Gly | Gly | Cys | Leu | Leu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Ser | Leu | Cys | Phe | Val | Pro | Val | Val | Arg | Leu | Ala | Ala | Ser | Val | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Arg | Trp | Ala | Trp | Leu | Glu | Pro | Trp | Val | Arg | Gln | Val | Ala | Gly | Gly | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Glu | Arg | Leu | Arg | Gly | Lys | Trp | Trp | His | Leu | Leu | Leu |     |     |     |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     |     |     |

&lt;210&gt; 184

&lt;211&gt; 33

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 184

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Phe | Leu | Ser | Ser | Thr | Gly | Val | Ser | Ala | Pro | Leu | Gln | Gly | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Lys | Ser | Leu | His | Pro | Glu | Pro | Pro | Pro | Ile | Pro | Val | His | Phe | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

Arg

<210> 185  
 <211> 46  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 185

|          |     |           |           |          |     |     |           |           |           |     |     |           |           |           |     |
|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| His<br>1 | Ser | Phe       | Ser       | Ala<br>5 | Arg | Leu | Glu       | Phe       | Leu<br>10 | His | Leu | Cys       | Arg       | Gly<br>15 | Lys |
| Val      | Ser | Pro       | Cys<br>20 | Thr      | Leu | Asn | His       | Pro<br>25 | Pro       | Phe | Leu | Phe       | Ile<br>30 | Ser       | Ala |
| Asp      | Asn | Asp<br>35 | Gly       | Gly      | Gly | Gly | Val<br>40 | Ser       | Ile       | Val | Leu | Arg<br>45 | Val       |           |     |

<210> 186  
 <211> 105  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 186

|           |           |           |            |           |           |           |           |            |           |           |           |           |           |           |           |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Val<br>1  | Glu       | Gly       | Thr        | Cys<br>5  | Ser       | Asp       | Gly       | Val        | Phe<br>10 | Ser       | Gly       | Phe       | Leu       | Ala<br>15 | Pro       |
| Gly       | Cys       | Ala       | Val<br>20  | His       | Arg       | Pro       | His       | Arg<br>25  | Pro       | Trp       | Pro       | Gln       | His<br>30 | Pro       | Gln       |
| Gln       | Gly       | Gln<br>35 | Trp        | Lys       | Cys       | Gln       | Ser<br>40 | Ser        | Lys       | Cys       | His       | His<br>45 | Phe       | Pro       | Leu       |
| Ser       | Leu<br>50 | Ser       | Leu        | Ser       | Pro       | Pro<br>55 | Ala       | Thr        | Cys       | Leu       | Thr<br>60 | His       | Gly       | Ser       | Asn       |
| Gln<br>65 | Ala       | His       | Arg        | Ala       | Thr<br>70 | Asp       | Ala       | Ala        | Ser       | Leu<br>75 | Thr       | Thr       | Gly       | Thr       | Lys<br>80 |
| Gln       | Arg       | Glu       | Arg        | Asp<br>85 | Asn       | Arg       | His       | Pro        | Pro<br>90 | Ile       | Ser       | Phe       | Ser       | Lys<br>95 | Cys       |
| Leu       | Trp       | Met       | Arg<br>100 | Gly       | Arg       | Gln       | Ile       | Arg<br>105 |           |           |           |           |           |           |           |

<210> 187  
 <211> 73  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 187

|          |     |     |           |          |     |     |     |           |           |     |     |     |           |           |     |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Arg<br>1 | Gly | His | Ala       | Val<br>5 | Thr | Glu | Tyr | Leu       | Val<br>10 | Gly | Ser | Leu | Leu       | Leu<br>15 | Ala |
| Val      | Gln | Phe | Thr<br>20 | Gly      | Pro | Thr | Gly | Leu<br>25 | Gly       | Pro | Ser | Ile | Pro<br>30 | Ser       | Arg |

|     |     |           |     |     |     |     |           |     |     |     |     |           |     |     |     |
|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|
| Asp | Ser | Gly<br>35 | Ser | Val | Arg | Ala | Val<br>40 | Asn | Ala | Thr | Thr | Ser<br>45 | Leu | Ser | Ala |
|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|

|     |           |     |     |     |     |           |     |     |     |     |           |     |     |     |     |
|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|
| Ser | Pro<br>50 | Cys | Pro | Arg | Gln | Pro<br>55 | Pro | Ala | Ser | Pro | Thr<br>60 | Ala | Leu | Thr | Lys |
|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|

|           |     |     |     |     |           |     |     |     |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|
| Pro<br>65 | Thr | Glu | Gln | Leu | Thr<br>70 | Leu | Pro | Val |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|

<210> 188  
 <211> 28  
 <212> PRT  
 <213> homo sapiens

<400> 188

|          |     |     |           |          |     |     |     |           |           |     |     |     |     |           |     |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----|-----------|-----|
| Met<br>1 | Phe | Phe | Ile       | Phe<br>5 | Phe | Met | Leu | Ser       | Ile<br>10 | Gln | Ala | Leu | Phe | His<br>15 | Gly |
| Gln      | Gln | Val | Ile<br>20 | Phe      | His | Asn | Val | Asp<br>25 | Phe       | Pro | Lys |     |     |           |     |

<210> 189  
 <211> 65  
 <212> PRT  
 <213> homo sapiens

<400> 189

|          |           |           |           |          |     |           |           |           |           |     |           |           |           |           |     |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Leu<br>1 | Leu       | Asn       | Thr       | Ala<br>5 | Ile | Leu       | Trp       | Leu       | Leu<br>10 | Leu | Val       | Phe       | Leu       | Trp<br>15 | Tyr |
| Val      | Val       | Trp       | Glu<br>20 | Cys      | Leu | Trp       | Asn       | Tyr<br>25 | Gln       | Tyr | Leu       | Lys       | Phe<br>30 | Ser       | Lys |
| Glu      | Pro       | Trp<br>35 | Lys       | Ser      | Ile | Thr       | Leu<br>40 | Asn       | Glu       | Ser | Leu       | Ser<br>45 | Leu       | Tyr       | Met |
| Asn      | Tyr<br>50 | Val       | Leu       | Lys      | Phe | Asp<br>55 | Gln       | Leu       | Ser       | Leu | Arg<br>60 | His       | Lys       | Thr       | Val |

Ile  
65

<210> 190  
 <211> 30  
 <212> PRT  
 <213> homo sapiens

<400> 190

|          |     |     |           |          |     |     |     |           |           |     |     |     |           |           |     |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Cys<br>1 | Phe | Ser | Phe       | Phe<br>5 | Ser | Cys | Tyr | Leu       | Ser<br>10 | Lys | His | Cys | Ser       | Met<br>15 | Val |
| Ser      | Lys | Ser | Tyr<br>20 | Phe      | Ile | Met | Trp | Ile<br>25 | Phe       | Gln | Asn | Asn | Tyr<br>30 |           |     |

<210> 191  
 <211> 41

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 191

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Phe | Val | Thr | Asn | Val | Phe | Tyr | Leu | Phe | Ile | Asn | Lys | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Cys | Ile | Val | Gln | Ala | Leu | Tyr | Pro | Asn | Pro | Ser | Thr | Gln | Lys | Lys | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asn | Asn | Arg | Pro | Trp | Met | Ala | Gln | Thr |     |     |     |     |     |     |     |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |     |     |     |     |

&lt;210&gt; 192

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 192

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Lys | Pro | Phe | Ile | Pro | Ile | Gln | Val | Leu | Arg | Lys | Arg | Leu | Thr | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Pro | Gly | Trp | His | Arg | His | Asn | Leu | Phe | Gly | Val | Ile |     |     |     |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     |     |     |

&lt;210&gt; 193

&lt;211&gt; 33

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 193

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | His | Met | Val | Thr | Asn | Thr | Tyr | Asp | Phe | Ser | Phe | Arg | Asn | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Arg | Arg | Leu | Asn | Leu | Leu | Leu | Gln | Gln | Gln | Lys | Phe | Asn | Pro | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asn |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 194

&lt;211&gt; 153

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 194

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Leu | Arg | Lys | Glu | Val | Leu | Lys | Ser | Lys | Met | Gly | Lys | Ser | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Ile | Ala | Leu | Pro | His | Gly | Gln | Leu | Val | His | Gly | Ile | His | Leu | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Gln | Pro | Lys | Ile | Asn | Arg | Gln | Lys | Ser | Lys | Tyr | Asn | Leu | Pro | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Thr | Lys | Ile | Thr | Ser | Ala | Lys | Arg | Asn | Glu | Asn | Asn | Phe | Trp | Gln | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|            |            |            |            |           |            |            |            |            |           |           |            |            |            |           |           |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Ser<br>65  | Val        | Ser        | Ser        | Asp       | Arg<br>70  | Ile        | Gln        | Lys        | Gln       | Glu<br>75 | Lys        | Lys        | Pro        | Phe       | Lys<br>80 |
| Asn        | Thr        | Glu        | Asn        | Ile<br>85 | Lys        | Asn        | Ser        | His        | Leu<br>90 | Lys       | Lys        | Ser        | Ala        | Phe<br>95 | Leu       |
| Thr        | Glu        | Val        | Ser<br>100 | Gln       | Lys        | Glu        | Asn        | Tyr<br>105 | Ala       | Gly       | Ala        | Lys        | Phe<br>110 | Ser       | Asp       |
| Pro        | Pro        | Ser<br>115 | Pro        | Ser       | Val        | Leu        | Pro<br>120 | Lys        | Pro       | Pro       | Ser        | His<br>125 | Trp        | Met       | Gly       |
| Ser        | Thr<br>130 | Val        | Glu        | Asn       | Ser        | Asn<br>135 | Gln        | Asn        | Arg       | Glu       | Leu<br>140 | Met        | Ala        | Val       | His       |
| Leu<br>145 | Lys        | Thr        | Leu        | Leu       | Lys<br>150 | Val        | Gln        | Thr        |           |           |            |            |            |           |           |

<210> 195  
 <211> 304  
 <212> PRT  
 <213> homo sapiens  
 <400> 195

|           |            |            |            |           |           |            |            |            |           |           |            |            |            |           |           |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Ser<br>1  | Leu        | Tyr        | Tyr        | Tyr<br>5  | Gly       | Ile        | Arg        | Asp        | Leu<br>10 | Ala       | Thr        | Val        | Phe        | Phe<br>15 | Tyr       |
| Met       | Leu        | Val        | Ala<br>20  | Ile       | Ile       | Ile        | His        | Ala<br>25  | Val       | Ile       | Gln        | Glu        | Tyr<br>30  | Met       | Leu       |
| Asp       | Lys        | Ile<br>35  | Asn        | Arg       | Arg       | Met        | His<br>40  | Phe        | Ser       | Lys       | Thr        | Lys<br>45  | His        | Ser       | Lys       |
| Phe       | Asn<br>50  | Glu        | Ser        | Gly       | Gln       | Leu<br>55  | Ser        | Ala        | Phe       | Tyr       | Leu<br>60  | Phe        | Ala        | Cys       | Val       |
| Trp<br>65 | Gly        | Thr        | Phe        | Ile       | Leu<br>70 | Ile        | Ser        | Glu        | Asn       | Tyr<br>75 | Ile        | Ser        | Asp        | Pro       | Thr<br>80 |
| Ile       | Leu        | Trp        | Arg        | Ala<br>85 | Tyr       | Pro        | His        | Asn        | Leu<br>90 | Met       | Thr        | Phe        | Gln        | Met<br>95 | Lys       |
| Phe       | Phe        | Tyr        | Ile<br>100 | Ser       | Gln       | Leu        | Ala        | Tyr<br>105 | Trp       | Leu       | His        | Ala        | Phe<br>110 | Pro       | Glu       |
| Leu       | Tyr        | Phe<br>115 | Gln        | Lys       | Thr       | Lys        | Lys<br>120 | Glu        | Asp       | Ile       | Pro        | Arg<br>125 | Gln        | Leu       | Val       |
| Tyr       | Ile<br>130 | Gly        | Leu        | Tyr       | Leu       | Phe<br>135 | His        | Ile        | Ala       | Gly       | Ala<br>140 | Tyr        | Leu        | Leu       | Asn       |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu<br>145 | Asn        | His        | Leu        | Gly        | Leu<br>150 | Val        | Leu        | Leu        | Val        | Leu<br>155 | His        | Tyr        | Phe        | Val        | Glu<br>160 |
| Phe        | Leu        | Phe        | His        | Ile<br>165 | Ser        | Arg        | Leu        | Phe        | Tyr<br>170 | Phe        | Ser        | Asn        | Glu        | Lys<br>175 | Tyr        |
| Gln        | Lys        | Gly        | Phe<br>180 | Ser        | Leu        | Trp        | Ala        | Val<br>185 | Leu        | Phe        | Val        | Leu        | Gly<br>190 | Arg        | Leu        |
| Leu        | Thr        | Leu<br>195 | Ile        | Leu        | Ser        | Val        | Leu<br>200 | Thr        | Val        | Gly        | Phe        | Gly<br>205 | Leu        | Ala        | Arg        |
| Ala        | Glu<br>210 | Asn        | Gln        | Lys        | Leu        | Asp<br>215 | Phe        | Ser        | Thr        | Gly        | Asn<br>220 | Phe        | Asn        | Val        | Leu        |
| Ala<br>225 | Val        | Arg        | Ile        | Ala        | Val<br>230 | Leu        | Ala        | Ser        | Ile        | Cys<br>235 | Val        | Thr        | Gln        | Ala        | Phe<br>240 |
| Met        | Met        | Trp        | Lys        | Phe<br>245 | Ile        | Asn        | Phe        | Gln        | Leu<br>250 | Arg        | Arg        | Trp        | Arg        | Glu<br>255 | His        |
| Ser        | Ala        | Phe        | Gln<br>260 | Ala        | Pro        | Ala        | Val        | Lys<br>265 | Lys        | Lys        | Pro        | Thr        | Val<br>270 | Thr        | Lys        |
| Gly        | Arg        | Ser<br>275 | Ser        | Lys        | Lys        | Gly        | Thr<br>280 | Glu        | Asn        | Gly        | Val        | Asn<br>285 | Gly        | Thr        | Leu        |
| Thr        | Ser<br>290 | Asn        | Val        | Ala        | Asp        | Ser<br>295 | Pro        | Arg        | Asn        | Lys        | Lys<br>300 | Glu        | Lys        | Ser        | Ser        |

<210> 196  
 <400> 196  
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 <210> 197  
 <400> 197  
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 <210> 198  
 <400> 198  
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 <210> 199  
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 <210> 201  
 <211> 198  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 201

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Lys<br>1   | Met        | Thr        | Thr        | Ala<br>5   | Ala        | Arg        | Pro        | Thr        | Phe<br>10  | Glu        | Pro        | Ala        | Arg        | Gly<br>15  | Gly        |
| Arg        | Gly        | Lys        | Gly<br>20  | Glu        | Gly        | Asp        | Leu        | Ser<br>25  | Gln        | Leu        | Ser        | Lys        | Gln<br>30  | Tyr        | Ser        |
| Ser        | Arg        | Asp<br>35  | Leu        | Pro        | Ser        | His        | Thr<br>40  | Lys        | Ile        | Lys        | Tyr        | Arg<br>45  | Gln        | Thr        | Thr        |
| Gln        | Asp<br>50  | Ala        | Pro        | Glu        | Glu        | Val<br>55  | Arg        | Asn        | Arg        | Asp        | Phe<br>60  | Arg        | Arg        | Glu        | Leu        |
| Glu<br>65  | Glu        | Arg        | Glu        | Arg        | Ala<br>70  | Ala        | Ala        | Arg        | Glu        | Lys<br>75  | Asn        | Arg        | Asp        | Arg        | Pro<br>80  |
| Thr        | Arg        | Glu        | His        | Thr<br>85  | Thr        | Ser        | Ser        | Ser        | Val<br>90  | Ser        | Lys        | Lys        | Pro        | Arg<br>95  | Leu        |
| Asp        | Gln        | Ile        | Pro<br>100 | Ala        | Ala        | Asn        | Leu        | Asp<br>105 | Ala        | Asp        | Asp        | Pro        | Leu<br>110 | Thr        | Asp        |
| Glu        | Glu        | Asp<br>115 | Glu        | Asp        | Phe        | Glu        | Glu<br>120 | Glu        | Ser        | Asp        | Asp        | Asp<br>125 | Asp        | Thr        | Ala        |
| Ala        | Leu<br>130 | Leu        | Ala        | Glu        | Leu        | Glu<br>135 | Lys        | Ile        | Lys        | Lys        | Glu<br>140 | Arg        | Ala        | Glu        | Lys        |
| Gly<br>145 | Gln        | Gly        | Pro        | Gly        | Lys<br>150 | Gly        | Pro        | Arg        | Ala        | Lys<br>155 | Lys        | Ala        | Leu        | Arg        | Gly<br>160 |
| Gly        | Arg        | Val        | Ser        | Phe<br>165 | Trp        | Glu        | Asn        | Ile        | Gly<br>170 | Trp        | Ala        | Gly        | Asn        | Pro<br>175 | Phe        |
| Pro        | Leu        | Ile        | Leu<br>180 | Ser        | Leu        | Ala        | His        | Ser<br>185 | Lys        | Leu        | Lys        | Ala        | Asp<br>190 | Phe        | Glu        |
| Lys        | Phe        | Glu<br>195 | Arg        | Arg        | Val        |            |            |            |            |            |            |            |            |            |            |

&lt;210&gt; 202

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 202

|          |     |     |           |          |     |     |     |           |           |     |     |     |           |           |     |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Val<br>1 | Leu | Ile | Phe       | Leu<br>5 | Val | Phe | Leu | Leu       | Asp<br>10 | Gly | Lys | Ala | Val       | Gly<br>15 | Ile |
| Asn      | Arg | Gly | Gln<br>20 | Arg      | Leu | Met | Leu | Glu<br>25 | Trp       | Pro | Val | Glu | Val<br>30 | Val       | Glu |



Gln Ser Ser His Leu Leu Ser Gly Ala Val Ser Gly Trp Val Tyr Leu  
35 40 45

Lys Ala Thr Lys Cys Phe Gly  
50 55

<210> 203  
<211> 66  
<212> PRT  
<213> homo sapiens

<400> 203

Ser Pro Gly Phe Phe Leu Ser Leu Pro Phe Ser Thr Gly Xxx Ala Trp  
1 5 10 15  
Ala Ser Ser Ser Cys His Pro Ser Arg Lys Ala Pro Ala Pro Ser Cys  
20 25 30  
Leu Pro Ala Ala Cys Ile Gln Gly Gln Ser Ser Gly Leu Gln Thr Gly  
35 40 45  
Leu Val Pro Pro Pro Leu Gln Gly Met Gly Val Gly Glu Gly Ala Phe  
50 55 60

Lys Lys  
65

<210> 204  
<211> 161  
<212> PRT  
<213> homo sapiens

<400> 204

His Leu Gly Tyr Gly Lys Leu Leu Trp Cys Val Val Gly Phe Leu Phe  
1 5 10 15  
Ser Phe Leu Ser Phe Phe Ser Pro Phe Ser Leu Leu Ala Phe Ser Phe  
20 25 30  
Pro Phe Pro Ser Pro Leu Ala Lys Leu Gly Pro His Pro His Val Ile  
35 40 45  
Leu Leu Gly Arg Arg Leu Pro His Leu Val Cys Arg Gln His Ala Ser  
50 55 60  
Lys Ala Arg Ala Gln Ala Cys Arg Leu Gly Trp Cys Leu Leu Arg Phe  
65 70 75 80  
Arg Val Trp Glu Leu Val Lys Gly Leu Ser Lys Asn Asn Lys Lys Lys  
85 90 95  
Lys Val Lys Ser Leu Val Ala Ser Ile His Ser Asp Pro Gly Arg Gln

100

66

105

110

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Gly | Phe | Val | Asp | Leu | Asp | Ser | Leu | Gly | Met | Ser | Ser | Cys | Gln | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gly | Gln | Asp | Pro | Gly | Leu | Pro | Arg | Ala | Glu | Ala | Leu | Pro | Ala | Thr | Arg |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ile | Pro | Pro | Leu | Trp | Gly | Leu | Cys | Val | Gln | Arg | Ser | Gly | Ser | Glu | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

Ser

<210> 205  
 <211> 37  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 205

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Leu | Val | Phe | Ile | Val | Glu | His | Thr | Tyr | Gln | Gly | Glu | Val | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| His | Thr | Gln | Leu | Gln | Ile | Ile | Phe | Gly | Lys | Lys | Ala | Val | Lys | Lys | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| Lys | Leu | Gln | Leu | Leu |
|     |     | 35  |     |     |

<210> 206  
 <211> 32  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 206

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asn | Tyr | Phe | Ala | Phe | Ser | Val | Asn | Leu | Arg | Ser | Val | Leu | Asn | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Gln | Ser | Ser | Ala | Arg | Pro | Phe | Pro | Ser | Leu | Met | Ser | Ala | Leu | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

<210> 207  
 <211> 102  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 207

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Met | Leu | Gln | Ile | Asn | Leu | Tyr | Phe | Phe | Pro | Leu | Gly | Phe | Ser | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asn | Thr | Thr | Thr | Ser | Thr | Pro | Asn | Glu | His | Gly | Thr | Cys | Leu | Phe | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Leu | Leu | Ile | Tyr | Ser | Arg | Phe | Ser | Ser | Val | Phe | Phe | Ser | Asn | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Phe | Ser | Cys | Ser | Ser | Gly | Leu | Leu | Ser | Gly | Ser | Ile | Val | Ala | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asp | Ser | Ile | Arg | Ser | Thr | Leu | His | Ser | Asp | Val | Lys | His | Ser | His | Cys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Leu | Asp | Ser | Ser | Ser | Phe | Leu | Ser | Ser | Asn | Ser | Ile | Thr | Asp | Lys | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Ser | Val | Leu | Thr | Asp | Glu |
|     |     |     | 100 |     |     |

<210> 208  
 <211> 34  
 <212> PRT  
 <213> homo sapiens

<400> 208

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Leu | Phe | Ser | Lys | Glu | Tyr | Val | Ile | Asp | Leu | Gln | Val | Ser | Ser | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Ser | Ala | Lys | Ala | Ser | Gly | Ser | Ala | Cys | Ser | Ser | Ser | Lys | Ser | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

Asn Pro

<210> 209  
 <211> 43  
 <212> PRT  
 <213> homo sapiens

<400> 209

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ala | His | Trp | Gln | Gly | Asp | Gln | Lys | His | Tyr | Phe | His | Thr | Cys | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Met | Ile | Leu | Phe | Phe | Leu | Arg | Glu | Ser | His | Ser | Val | Ala | Arg | Leu | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gln | Trp | His | Asp | Leu | Gly | Ser | Leu | Gln | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |

<210> 210  
 <211> 204  
 <212> PRT  
 <213> homo sapiens

<400> 210

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Leu | Thr | Phe | Glu | Gln | Ile | Arg | Lys | Leu | Asn | Pro | Ala | Ala | Asn | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Leu | Arg | Asn | Asp | Phe | Pro | Asp | Glu | Lys | Ile | Pro | Thr | Leu | Arg | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Val | Ala | Glu | Cys | Leu | Asn | His | Asn | Leu | Thr | Ile | Phe | Phe | Asp | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |  |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Lys        | Gly<br>50  | His        | Ala        | His        | Lys        | Ala<br>55  | Thr        | Glu        | Ala        | Leu        | Lys<br>60  | Lys        | Met        | Tyr        | Met        |  |
| Glu<br>65  | Phe        | Pro        | Gln        | Leu        | Tyr<br>70  | Asn        | Asn        | Ser        | Val        | Val<br>75  | Cys        | Ser        | Phe        | Leu        | Pro<br>80  |  |
| Glu        | Val        | Ile        | Tyr        | Lys<br>85  | Met        | Arg        | Gln        | Thr        | Asp<br>90  | Arg        | Asp        | Val        | Ile        | Thr<br>95  | Ala        |  |
| Leu        | Thr        | His        | Arg<br>100 | Pro        | Trp        | Ser        | Leu        | Ser<br>105 | His        | Thr        | Gly        | Asp        | Gly<br>110 | Lys        | Pro        |  |
| Arg        | Tyr        | Asp<br>115 | Thr        | Phe        | Trp        | Lys        | His<br>120 | Phe        | Ile        | Phe        | Val        | Met<br>125 | Met        | Asp        | Ile        |  |
| Leu        | Leu<br>130 | Asp        | Trp        | Ser        | Met        | His<br>135 | Asn        | Ile        | Leu        | Trp        | Tyr<br>140 | Leu        | Cys        | Gly        | Ile        |  |
| Ser<br>145 | Ala        | Phe        | Leu        | Met        | Gln<br>150 | Lys        | Asp        | Phe        | Val        | Ser<br>155 | Pro        | Ala        | Tyr        | Leu        | Lys<br>160 |  |
| Lys        | Trp        | Ser        | Ala        | Lys<br>165 | Gly        | Ile        | Gln        | Val        | Val<br>170 | Gly        | Trp        | Thr        | Val        | Asn<br>175 | Thr        |  |
| Phe        | Asp        | Glu        | Lys<br>180 | Ser        | Tyr        | Tyr        | Glu        | Ser<br>185 | His        | Leu        | Gly        | Ser        | Ser<br>190 | Tyr        | Ile        |  |
| Thr        | Asp        | Ser<br>195 | Met        | Val        | Glu        | Asp        | Cys<br>200 | Glu        | Pro        | His        | Phe        |            |            |            |            |  |

<210> 211  
 <400> 211  
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<210> 212  
 <400> 212  
 000

<210> 213  
 <400> 213  
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<210> 214  
 <211> 33  
 <212> PRT  
 <213> homo sapiens

<400> 214

|          |     |     |           |          |     |     |     |           |           |     |     |     |           |           |     |  |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|--|
| Ser<br>1 | Phe | Lys | Val       | Thr<br>5 | Leu | Trp | Lys | Ser       | Glu<br>10 | Thr | Arg | Gly | Cys       | His<br>15 | Glu |  |
| Gly      | Ser | Phe | Ser<br>20 | Phe      | Ser | Glu | Glu | Lys<br>25 | Ile       | Gly | Met | Gly | Tyr<br>30 | Arg       | Thr |  |

Ile

<210> 215  
 <211> 61  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 215

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ser | Lys | Val | Asp | Val | Ile | Phe | Thr | Pro | Met | Ser | Ile | Cys | Pro | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Val | Ser | Ser | Ser | Pro | Leu | Gly | Ile | Tyr | Ser | Leu | Tyr | Val | Asn | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Arg | Ser | Ser | Asp | Ser | Leu | Ile | Gln | Ser | Ser | Ser | Phe | Ser | Ser | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Leu | Cys | Arg | Leu | Leu | Asp | Ile | Tyr | Cys | Ser | Thr | Thr |     |     |     |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

<210> 216  
 <211> 24  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 216

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Met | Tyr | Lys | Ile | Ala | Lys | Cys | Leu | Leu | Phe | Ile | Lys | Arg | Cys | Asn |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Val | Gly | Gly | Arg | Gly | Asn | Phe |     |     |     |     |     |     |     |     |
|     |     |     | 20  |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 217  
 <211> 1880  
 <212> DNA  
 <213> homo sapiens

&lt;400&gt; 217

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| cgccggggggc | cgggggcggc  | ccagggggggg | gcccgggggce | ggggccctgc  | ctgaggcgag  | 60   |
| agctgaagct  | gctcgagtc   | atcttgccac  | cgcgccacg   | agcgcttcg   | cattgccagc  | 120  |
| gcctgcctgg  | acgagctgag  | ctgcgagttc  | ctgctggctg  | gggcccggagg | ggccggggcg  | 180  |
| ggggccgcgc  | ccgaccgca   | tctccccca   | cgggggtcgg  | tgccctgggga | tcctgtccgc  | 240  |
| atccactgca  | acatcacgga  | gtcataccct  | gctgtgcccc  | ccatctgggtc | ggtggagtct  | 300  |
| gatgacccta  | acttggtgc   | tgtcttgag   | aggctgggtg  | acataaagaa  | agggaaatact | 360  |
| ctgctattgc  | agcatctgaa  | gaggatcatc  | tccgacctgt  | gtaaaactcta | taacctccct  | 420  |
| cagcatccag  | atgtggagat  | gctggatcaa  | cccttgccag  | cagagcagtg  | cacacaggaa  | 480  |
| gacgtgtctt  | cagaagatga  | agatgaggag  | atgcctgagg  | acacagaaga  | cttagatcac  | 540  |
| tatgaaatga  | aagaggaaga  | gccagctgag  | ggcaagaaat  | ctgaagatga  | tggcatttga  | 600  |
| aaagaaaact  | tggccatcct  | agagaaaatt  | aaaaagaacc  | agaggcaaga  | ttacttaaat  | 660  |
| ggtgcagtgt  | ctggctcggt  | gcaggccact  | gaccggctga  | tgaaggagct  | cagggatata  | 720  |
| taccgatcac  | agagtttcaa  | aggcggaac   | tatgcagtcg  | aactcgtgaa  | tgacagtctg  | 780  |
| tatgatttga  | atgtcaaaact | cctcaaagtt  | gaccaggaca  | gcgctttgca  | caacgatctc  | 840  |
| cagatcctca  | aagagaaaga  | aggagccgac  | ttcattctac  | ttaaactttc  | ctttaaagat  | 900  |
| aactttccct  | ttgacccacc  | atgtgtcagg  | gttgtgtctc  | cagtcctctc  | tggaggggat  | 960  |
| gttctgggct  | gaggggcat   | ctgcatggaa  | cttctcacca  | aacagggctg  | gagcagtgcc  | 1020 |
| tactccatag  | agtcagtgt   | catgcagatc  | agtgccacac  | tggtgaaggg  | gaaagcacga  | 1080 |
| gtgcagtttg  | gagccaacaa  | atctcaatac  | agtctgacaa  | gagcacagca  | gtcctacaag  | 1140 |
| tccttggtgc  | agatccacga  | aaaaaacggc  | tggtacacac  | ccccaaaaga  | agacggcta   | 1200 |

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ctctgcttat  tgcaggacaa  tgatggctat  tctaaacgct  aaggaaaaaa  aacaaacacal380
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1380

<210> 213  
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 <212> DNA  
 <213> homo sapiens

<400> 213

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gctcagcagg  accgaattca  gcaagagatt  gctgtgcaga  accctctggg  gtcagagcgg  180
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caggtggagt  acatggaccg  cggcgagggc  ggcaccacca  atccgcacat  cttccctgag  780
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acagagggtt  ttctgtgggt  gtaaatgggt  ctatttcacc  cccttcttcc  tgtcacatga  960
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aaaa

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1024

<210> 219  
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 <213> homo sapiens

<400> 219

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aaaaactgct  ttcataatct  ccagtgttaag  ccacaaagaa  gcttttctat  aaaggcttga  300
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tttaaagtag  aaaaaagact  tacattctca  tgacacaaac  ttttagtttt  acattcacca  960
aaacatttta  aaatcactca  aacatgagaa  ttgaaaatgt  gtgtgcttat  ttgggagagg  1020
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2383

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<210> 220  
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 <212> DNA  
 <213> homo sapiens

<400> 220

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3210

<210> 221  
 <211> 1030  
 <212> DNA  
 <213> homo sapiens

<400> 221

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```

1030

<210> 222  
 <211> 1216  
 <212> DNA  
 <213> homo sapiens

<400> 222

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```

1216

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 <211> 2369  
 <212> DNA  
 <213> homo sapiens

<400> 223

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2369

<210> 224  
 <211> 349

<212> DNA  
<213> homo sapiens

<400> 224

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<210> 225  
<211> 1502  
<212> DNA  
<213> homo sapiens

<400> 225

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aa 1502

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<210> 226  
<211> 1892  
<212> DNA  
<213> homo sapiens

<400> 226

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|             |             |             |             |             |             |      |
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| gttggctctg  | tgtcagtttt  | ccactccagtg | ttaaactactt | gttactgcca  | tgcctgcttc  | 240  |
| cctcccttga  | agtgtctata  | agctcatcac  | agcctagagt  | taagtaaagt  | caattcacag  | 300  |
| aagcacaaat  | ttgccccctg  | cgagacattg  | ttgccccttat | ctagtctctac | aagtaggggt  | 360  |
| ttgcatactg  | tgtttgcccc  | taggggtgtc  | agtgcaccag  | aaatactctt  | aaatagtggg  | 420  |
| aaaaatgcac  | atggcttaatg | cacatgtttac | ttttaaatca  | ttaggatatc  | cctcacctgt  | 480  |
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| acgacactca  | gtattcattt  | tattgaagca  | tgcaagtaaa  | gcactttttc  | taattttatat | 720  |
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| aaaaaaaaaa  | aaaaaaaaaa  | aaaaaaaaaa  | aa          |             |             | 1892 |

&lt;210&gt; 227

&lt;211&gt; 1522

&lt;212&gt; DNA

&lt;213&gt; homo sapiens

&lt;400&gt; 227

|             |             |             |             |             |             |      |
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| ctgagggggc  | agtgtggctc  | cctgcctgtc  | ccatccccat  | gccccgtccg  | cggggctgtg  | 660  |
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| ccagggcaga  | gctccccctc  | ctgcnagagt  | ctgggaggcg  | gtgcaggctg  | tcctggctgc  | 780  |
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| cagaggcctg  | ctctcctcac  | acatttgtgtg | gtttgggggt  | aatgatggag  | ggagacacct  | 960  |
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 <212> DNA  
 <213> homo sapiens

<400> 223

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2016

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 <212> DNA  
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<400> 229

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 <212> DNA  
 <213> homo sapiens

<400> 230

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 <212> DNA  
 <213> homo sapiens

<400> 231

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1473

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 <212> DNA  
 <213> homo sapiens

<400> 232

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 <213> homo sapiens

<400> 233

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1756

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<212> DNA  
<213> homo sapiens

<400> 234

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1286

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1230

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&lt;211&gt; 2328

&lt;212&gt; DNA

&lt;213&gt; hcmc sapiens

&lt;400&gt; 236

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<212> DNA
<213> homo sapiens

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<212> DNA  
<213> homo sapiens

<400> 239

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<211> 2409

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2409

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<211> 2594

<212> DNA

<213> homo sapiens

<400> 241

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2594

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3903

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1730

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<211> 3439

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33

<400> 247

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3439



<210> 248  
 <211> 377  
 <212> PRT  
 <213> homo sapiens

<400> 248

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser<br>1   | Cys        | Ser        | Ser        | Pro<br>5   | Ser        | Cys        | His        | Arg        | Gly<br>10  | His        | Glu        | Arg        | Phe        | Arg<br>15  | Ile        |
| Ala        | Ser        | Ala        | Cys<br>20  | Leu        | Asp        | Glu        | Leu        | Ser<br>25  | Cys        | Glu        | Phe        | Leu        | Leu<br>30  | Ala        | Gly        |
| Ala        | Gly        | Gly<br>35  | Ala        | Gly        | Ala        | Gly        | Ala<br>40  | Ala        | Pro        | Gly        | Pro        | His<br>45  | Leu        | Pro        | Pro        |
| Arg        | Gly<br>50  | Ser        | Val        | Pro        | Gly        | Asp<br>55  | Pro        | Val        | Arg        | Ile        | His<br>60  | Cys        | Asn        | Ile        | Thr        |
| Glu<br>65  | Ser        | Tyr        | Pro        | Ala        | Val<br>70  | Pro        | Pro        | Ile        | Trp        | Ser<br>75  | Val        | Glu        | Ser        | Asp        | Asp<br>80  |
| Pro        | Asn        | Leu        | Ala        | Ala<br>85  | Val        | Leu        | Glu        | Arg        | Leu<br>90  | Val        | Asp        | Ile        | Lys        | Lys<br>95  | Gly        |
| Asn        | Thr        | Leu        | Leu<br>100 | Leu        | Gln        | His        | Leu        | Lys<br>105 | Arg        | Ile        | Ile        | Ser        | Asp<br>110 | Leu        | Cys        |
| Lys        | Leu        | Tyr<br>115 | Asn        | Leu        | Pro        | Gln        | His<br>120 | Pro        | Asp        | Val        | Glu        | Met<br>125 | Leu        | Asp        | Gln        |
| Pro        | Leu<br>130 | Pro        | Ala        | Glu        | Gln        | Cys<br>135 | Thr        | Gln        | Glu        | Asp        | Val<br>140 | Ser        | Ser        | Glu        | Asp        |
| Glu<br>145 | Asp        | Glu        | Glu        | Met        | Pro<br>150 | Glu        | Asp        | Thr        | Glu        | Asp<br>155 | Leu        | Asp        | His        | Tyr        | Glu<br>160 |
| Met        | Lys        | Glu        | Glu        | Glu<br>165 | Pro        | Ala        | Glu        | Gly        | Lys<br>170 | Lys        | Ser        | Glu        | Asp        | Asp<br>175 | Gly        |
| Ile        | Gly        | Lys        | Glu<br>180 | Asn        | Leu        | Ala        | Ile        | Leu<br>185 | Glu        | Lys        | Ile        | Lys        | Lys<br>190 | Asn        | Gln        |
| Arg        | Gln        | Asp<br>195 | Tyr        | Leu        | Asn        | Gly        | Ala<br>200 | Val        | Ser        | Gly        | Ser        | Val<br>205 | Gln        | Ala        | Thr        |
| Asp        | Arg<br>210 | Leu        | Met        | Lys        | Glu        | Leu<br>215 | Arg        | Asp        | Ile        | Tyr        | Arg<br>220 | Ser        | Gln        | Ser        | Phe        |
| Lys<br>225 | Gly        | Gly        | Asn        | Tyr        | Ala<br>230 | Val        | Glu        | Leu        | Val        | Asn<br>235 | Asp        | Ser        | Leu        | Tyr        | Asp<br>240 |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |  |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Trp        | Asn        | Val        | Lys        | Leu<br>245 | Leu        | Lys        | Val        | Asp        | Gln<br>250 | Asp        | Ser        | Ala        | Leu        | His<br>255 | Asn        |  |
| Asp        | Leu        | Gln        | Ile<br>260 | Leu        | Lys        | Glu        | Lys        | Glu<br>265 | Gly        | Ala        | Asp        | Phe        | Ile<br>270 | Leu        | Leu        |  |
| Asn        | Phe        | Ser<br>275 | Phe        | Lys        | Asp        | Asn        | Phe<br>280 | Pro        | Phe        | Asp        | Pro        | Pro<br>285 | Phe        | Val        | Arg        |  |
| Val        | Val<br>290 | Ser        | Pro        | Val        | Leu        | Ser<br>295 | Gly        | Gly        | Tyr        | Val        | Leu<br>300 | Gly        | Gly        | Gly        | Ala        |  |
| Ile<br>305 | Cys        | Met        | Glu        | Leu        | Leu<br>310 | Thr        | Lys        | Gln        | Gly        | Trp<br>315 | Ser        | Ser        | Ala        | Tyr        | Ser<br>320 |  |
| Ile        | Glu        | Ser        | Val        | Ile<br>325 | Met        | Gln        | Ile        | Ser        | Ala<br>330 | Thr        | Leu        | Val        | Lys        | Gly<br>335 | Lys        |  |
| Ala        | Arg        | Val        | Gln<br>340 | Phe        | Gly        | Ala        | Asn        | Lys<br>345 | Ser        | Gln        | Tyr        | Ser        | Leu<br>350 | Thr        | Arg        |  |
| Ala        | Gln        | Gln<br>355 | Ser        | Tyr        | Lys        | Ser        | Leu<br>360 | Val        | Gln        | Ile        | His        | Glu<br>365 | Lys        | Asn        | Gly        |  |
| Trp        | Tyr<br>370 | Thr        | Pro        | Pro        | Lys        | Glu<br>375 | Asp        | Gly        |            |            |            |            |            |            |            |  |

&lt;210&gt; 249

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 249

|           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |  |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| Ala<br>1  | Val       | Gly       | Ser       | Ala<br>5  | Ala       | Leu       | Phe       | Lys       | Asp<br>10 | Gly       | Gly       | Gly       | Gly       | Thr<br>15 | Ser       |  |
| Ala       | Ala       | Glu       | Ala<br>20 | Gly       | Ala       | Ala       | Gly       | Gln<br>25 | Arg       | Leu       | Arg       | Ser       | Val<br>30 | Asn       | Cys       |  |
| Leu       | Ala       | Tyr<br>35 | Asp       | Glu       | Ala       | Ile       | Met<br>40 | Ala       | Gln       | Gln       | Asp       | Arg<br>45 | Ile       | Gln       | Gln       |  |
| Glu       | Ile<br>50 | Ala       | Val       | Gln       | Asn       | Pro<br>55 | Leu       | Val       | Ser       | Glu       | Arg<br>60 | Leu       | Glu       | Leu       | Ser       |  |
| Val<br>65 | Leu       | Tyr       | Lys       | Glu       | Tyr<br>70 | Ala       | Glu       | Asp       | Asp       | Asn<br>75 | Ile       | Tyr       | Gln       | Gln       | Lys<br>80 |  |
| Ile       | Lys       | Asp       | Leu       | His<br>85 | Lys       | Lys       | Tyr       | Ser       | Tyr<br>90 | Ile       | Arg       | Lys       | Thr       | Arg<br>95 | Pro       |  |

|            |              |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp        | Gly          | Asn        | Cys<br>100 | Phe        | Tyr        | Arg        | Ala        | Phe<br>105 | Gly        | Phe        | Ser        | His        | Leu<br>110 | Glu        | Ala        |
| Leu        | Leu          | Asp<br>115 | Asp        | Ser        | Lys        | Glu        | Leu<br>120 | Gln        | Arg        | Phe        | Lys        | Ala<br>125 | Val        | Ser        | Ala        |
| Lys        | Ser<br>130   | Lys        | Glu        | Asp        | Leu        | Val<br>135 | Ser        | Gln        | Gly        | Phe        | Thr<br>140 | Glu        | Phe        | Thr        | Ile        |
| Glu<br>145 | Asp          | Phe        | His        | Asn        | Thr<br>150 | Phe        | Met        | Asp        | Leu        | Ile<br>155 | Glu        | Gln        | Val        | Glu        | Lys<br>160 |
| Gln        | Thr          | Ser        | Val        | Ala<br>165 | Asp        | Leu        | Leu        | Ala        | Ser<br>170 | Phe        | Asn        | Asp        | Gln        | Ser<br>175 | Thr        |
| Ser        | Asp          | Tyr        | Leu<br>180 | Val        | Val        | Tyr        | Leu        | Arg<br>185 | Leu        | Leu        | Thr        | Ser        | Gly<br>190 | Tyr        | Leu        |
| Gln        | Arg          | Glu<br>195 | Ser        | Lys        | Phe        | Phe        | Glu<br>200 | His        | Phe        | Ile        | Glu        | Gly<br>205 | Gly        | Arg        | Thr        |
| Val        | Lys<br>210   | Glu        | Phe        | Cys        | Gln        | Gln<br>215 | Glu        | Val        | Glu        | Pro        | Met<br>220 | Cys        | Lys        | Glu        | Ser        |
| Asp<br>225 | His          | Ile        | His        | Ile        | Ile<br>230 | Ala        | Leu        | Ala        | Gln        | Ala<br>235 | Leu        | Ser        | Val        | Ser        | Ile<br>240 |
| Gln        | Val          | Glu        | Tyr        | Met<br>245 | Asp        | Arg        | Gly        | Glu        | Gly<br>250 | Gly        | Thr        | Thr        | Asn        | Pro<br>255 | His        |
| Ile        | Phe          | Pro        | Glu<br>260 | Gly        | Ser        | Glu        | Pro        | Lys<br>265 | Val        | Tyr        | Leu        | Leu        | Tyr<br>270 | Arg        | Pro        |
| Gly        | His          | Tyr<br>275 | Asp        | Ile        | Leu        | Tyr        | Lys<br>280 |            |            |            |            |            |            |            |            |
| <210>      | 250          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <211>      | 244          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <212>      | PRT          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <213>      | homo sapiens |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <400>      | 250          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Asp<br>1   | His          | Leu        | Gln        | Pro<br>5   | Gln        | Lys        | Asn        | Leu        | Cys<br>10  | Thr        | Cys        | Leu        | Ala        | Pro<br>15  | Gly        |
| Arg        | Gly          | Gly        | Gln<br>20  | Gln        | Gly        | Ser        | Ser        | Gly<br>25  | Leu        | Glu        | Pro        | Ala        | Leu<br>30  | Phe        | Val        |
| Glu        | Asp          | Ile<br>35  | Val        | Val        | Ser        | Arg        | Pro<br>40  | Val        | Glu        | Lys        | Val        | Asp<br>45  | Leu        | Gly        | Leu        |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Leu | Arg | Glu | Asp | Val | Arg | Ile | Gly | Gly | Ala | Ala | Leu | Ala | Ala |
|     | 50  |     |     |     |     | 35  |     |     |     |     | 60  |     |     |     |     |
| Val | His | Val | Leu | His | Leu | Asp | Gly | His | Ala | Glu | Gly | Leu | Gly | Gln | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Asn | Asp | Val | Asp | Val | Val | Ala | Leu | Leu | Ala | His | Gly | Leu | His | Leu | Leu |
|     |     |     |     | 95  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Leu | Ala | Glu | Leu | Leu | Asp | Ser | Pro | Ser | Thr | Leu | Asp | Glu | Val | Leu | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Glu | Leu | Ala | Leu | Ala | Leu | Gln | Val | Ala | Arg | Gly | Glu | Gln | Pro | Gln | Val |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Asp | His | Lys | Val | Val | Gly | Gly | Ala | Leu | Val | Ile | Glu | Gly | Gly | Gln | Gln |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Gly | Asp | Arg | Gly | Leu | Leu | Leu | His | Leu | Leu | Asn | Gln | Val | His | Glu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Arg | Val | Val | Glu | Ile | Leu | Asn | Cys | Glu | Phe | Ser | Glu | Ala | Leu | Gly | His |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Gln | Val | Phe | Leu | Ala | Leu | Gly | Arg | His | Ser | Leu | Glu | Pro | Leu | Gln | Leu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Ala | Val | Ile | Gln | Gln | Cys | Leu | Gln | Val | Gly | Glu | Ser | Glu | Ser | Pro |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ile | Glu | Thr | Val | Ala | Val | Arg | Pro | Gly | Leu | Ala | Asp | Val | Arg | Val | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Phe | Val | Glu | Val | Leu | Asp | Leu | Leu | Leu | Ile | Asp | Val | Val | Ile | Phe | Ser |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Ile | Leu | Leu | Val |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 251  
 <211> 293  
 <212> PRT  
 <213> homo sapiens  
 <400> 251

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Ala | Ala | Arg | Leu | Val | Cys | Leu | Arg | Thr | Leu | Pro | Ser | Arg | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | His | Pro | Ala | Phe | Thr | Lys | Ala | Ser | Pro | Val | Val | Lys | Asn | Ser | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

[illegible]

290

<210> 252  
 <211> 563  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 252

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Met<br>1   | Glu        | Arg        | Glu        | Leu<br>5   | Asn        | His        | Glu        | Lys        | Glu<br>10  | Arg        | Cys        | Asp        | Gln        | Leu<br>15  | Gln        |
| Ala        | Glu        | Gln        | Lys<br>20  | Gly        | Leu        | Thr        | Glu        | Val<br>25  | Thr        | Gln        | Ser        | Leu        | Lys<br>30  | Met        | Glu        |
| Asn        | Glu        | Glu<br>35  | Phe        | Lys        | Lys        | Arg        | Phe<br>40  | Ser        | Asp        | Ala        | Thr        | Ser<br>45  | Lys        | Ala        | His        |
| Gln        | Leu<br>50  | Glu        | Glu        | Asp        | Ile        | Val<br>55  | Ser        | Val        | Thr        | His        | Lys<br>60  | Ala        | Ile        | Glu        | Lys        |
| Glu<br>65  | Thr        | Glu        | Leu        | Asp        | Ser<br>70  | Leu        | Lys        | Asp        | Lys        | Leu<br>75  | Lys        | Lys        | Ala        | Gln        | His<br>80  |
| Glu        | Arg        | Glu        | Gln        | Leu<br>85  | Glu        | Cys        | Gln        | Leu        | Lys<br>90  | Thr        | Glu        | Lys        | Asp        | Glu<br>95  | Lys        |
| Glu        | Leu        | Tyr        | Lys<br>100 | Val        | His        | Leu        | Lys        | Asn<br>105 | Thr        | Glu        | Ile        | Glu        | Asn<br>110 | Thr        | Lys        |
| Leu        | Met        | Ser<br>115 | Glu        | Val        | Gln        | Thr        | Leu<br>120 | Lys        | Asn        | Leu        | Asp        | Gly<br>125 | Asn        | Lys        | Glu        |
| Ser        | Val<br>130 | Ile        | Thr        | His        | Phe        | Lys<br>135 | Glu        | Glu        | Ile        | Gly        | Arg<br>140 | Leu        | Gln        | Leu        | Cys        |
| Leu<br>145 | Ala        | Glu        | Lys        | Glu        | Asn<br>150 | Leu        | Gln        | Arg        | Thr        | Phe<br>155 | Leu        | Leu        | Thr        | Thr        | Ser<br>160 |
| Ser        | Lys        | Glu        | Asp        | Thr<br>165 | Cys        | Phe        | Leu        | Lys        | Glu<br>170 | Gln        | Leu        | Arg        | Lys        | Ala<br>175 | Glu        |
| Glu        | Gln        | Val        | Gln<br>180 | Ala        | Thr        | Arg        | Gln        | Glu<br>185 | Val        | Val        | Phe        | Leu        | Ala<br>190 | Lys        | Glu        |
| Leu        | Ser        | Asp<br>195 | Ala        | Val        | Asn        | Val        | Arg<br>200 | Asp        | Arg        | Thr        | Met        | Ala<br>205 | Asp        | Leu        | His        |
| Thr        | Ala<br>210 | Arg        | Leu        | Glu        | Asn        | Glu<br>215 | Lys        | Val        | Lys        | Lys        | Gln<br>220 | Leu        | Ala        | Asp        | Ala        |
| Val        | Ala        | Glu        | Leu        | Lys        | Leu        | Asn        | Ala        | Met        | Lys        | Lys        | Asp        | Gln        | Asp        | Lys        | Thr        |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 225        |            |            |            |            | 230        |            | 95         |            |            | 235        |            |            |            | 240        |            |
| Asp        | Thr        | Leu        | Glu        | His<br>245 | Glu        | Leu        | Arg        | Arg        | Glu<br>250 | Val        | Glu        | Asp        | Leu        | Lys<br>255 | Leu        |
| Arg        | Leu        | Gln        | Met<br>260 | Ala        | Ala        | Asp        | His        | Tyr<br>265 | Lys        | Glu        | Lys        | Phe        | Lys<br>270 | Glu        | Cys        |
| Gln        | Arg        | Leu<br>275 | Gln        | Lys        | Gln        | Ile        | Asn<br>280 | Lys        | Leu        | Ser        | Asp        | Gln<br>285 | Ser        | Ala        | Asn        |
| Asn        | Asn<br>290 | Asn        | Val        | Phe        | Thr        | Lys<br>295 | Lys        | Thr        | Gly        | Asn        | Gln<br>300 | Gln        | Lys        | Val        | Asn        |
| Asp<br>305 | Ala        | Ser        | Val        | Asn        | Thr<br>310 | Asp        | Pro        | Ala        | Thr        | Ser<br>315 | Ala        | Ser        | Thr        | Val        | Asp<br>320 |
| Val        | Lys        | Pro        | Ser        | Pro<br>325 | Ser        | Ala        | Ala        | Glu        | Ala<br>330 | Asp        | Phe        | Asp        | Ile        | Val<br>335 | Thr        |
| Lys        | Gly        | Gln        | Val<br>340 | Cys        | Glu        | Met        | Thr        | Lys<br>345 | Glu        | Ile        | Ala        | Asp        | Lys<br>350 | Thr        | Glu        |
| Lys        | Tyr        | Asn<br>355 | Lys        | Cys        | Lys        | Gln        | Leu<br>360 | Leu        | Gln        | Asp        | Glu        | Lys<br>365 | Ala        | Lys        | Cys        |
| Asn        | Lys<br>370 | Tyr        | Ala        | Asp        | Glu        | Leu<br>375 | Ala        | Lys        | Met        | Glu        | Leu<br>380 | Lys        | Trp        | Lys        | Glu        |
| Gln<br>385 | Val        | Lys        | Ile        | Ala        | Glu<br>390 | Asn        | Val        | Lys        | Leu        | Glu<br>395 | Leu        | Ala        | Glu        | Val        | Gln<br>400 |
| Asp        | Asn        | Tyr        | Lys        | Glu<br>405 | Leu        | Lys        | Arg        | Ser        | Leu<br>410 | Glu        | Asn        | Pro        | Ala        | Glu<br>415 | Arg        |
| Lys        | Met        | Glu        | Asp<br>420 | Gly        | Ala        | Asp        | Gly        | Ala<br>425 | Phe        | Tyr        | Pro        | Asp        | Glu<br>430 | Ile        | Gln        |
| Arg        | Pro        | Pro<br>435 | Val        | Arg        | Val        | Pro        | Ser<br>440 | Trp        | Gly        | Leu        | Glu        | Asp<br>445 | Asn        | Val        | Val        |
| Cys        | Ser<br>450 | Gln        | Pro        | Ala        | Arg        | Asn<br>455 | Phe        | Ser        | Arg        | Pro        | Asp<br>460 | Gly        | Leu        | Glu        | Asp        |
| Ser<br>465 | Glu        | Asp        | Ser        | Lys        | Glu<br>470 | Asp        | Glu        | Asn        | Val        | Pro<br>475 | Thr        | Ala        | Pro        | Asp        | Pro<br>480 |
| Pro        | Ser        | Gln        | His        | Leu<br>485 | Arg        | Gly        | His        | Gly        | Thr<br>490 | Gly        | Phe        | Cys        | Phe        | Asp<br>495 | Ser        |

|            |            |            |            |     |            |            |            |            |     |            |            |            |            |     |            |
|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|------------|
| Ser        | Phe        | Asp        | Val<br>300 | His | Lys        | Lys        | Cys        | Pro<br>305 | Leu | Cys        | Glu        | Leu        | Met<br>310 | Phe | Pro        |
| Pro        | Asn        | Tyr<br>315 | Asp        | Gln | Ser        | Lys        | Phe<br>320 | Glu        | Glu | His        | Val        | Glu<br>325 | Ser        | His | Trp        |
| Lys        | Val<br>530 | Cys        | Pro        | Met | Cys        | Ser<br>535 | Glu        | Gln        | Phe | Pro        | Pro<br>540 | Asp        | Tyr        | Asp | Gln        |
| Gln<br>545 | Val        | Phe        | Glu        | Arg | His<br>550 | Val        | Gln        | Thr        | His | Phe<br>555 | Asp        | Gln        | Asn        | Val | Leu<br>560 |
| Asn        | Phe        | Asp        |            |     |            |            |            |            |     |            |            |            |            |     |            |

<210> 253  
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 <212> PRT  
 <213> homo sapiens  
 <400> 253

|            |            |            |            |           |            |            |            |            |           |            |            |            |            |           |            |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Trp<br>1   | Thr        | Gly        | Thr        | Gly<br>5  | Arg        | Gly        | Ala        | Val        | Ala<br>10 | Ile        | Met        | Ala        | Asp        | Pro<br>15 | Asp        |
| Pro        | Arg        | Tyr        | Pro<br>20  | Arg       | Ser        | Ser        | Ile        | Glu<br>25  | Asp       | Asp        | Phe        | Asn        | Tyr<br>30  | Gly       | Ser        |
| Ser        | Val        | Ala<br>35  | Ser        | Ala       | Thr        | Val        | His<br>40  | Ile        | Arg       | Met        | Ala        | Phe<br>45  | Leu        | Arg       | Lys        |
| Val        | Tyr<br>50  | Ser        | Ile        | Leu       | Ser        | Leu<br>55  | Gln        | Val        | Leu       | Leu        | Thr<br>60  | Thr        | Val        | Thr       | Ser        |
| Thr<br>65  | Val        | Phe        | Leu        | Tyr       | Phe<br>70  | Glu        | Ser        | Val        | Arg       | Thr<br>75  | Phe        | Val        | His        | Glu       | Ser<br>80  |
| Pro        | Ala        | Leu        | Ile        | Leu<br>85 | Leu        | Phe        | Ala        | Leu        | Gly<br>90 | Ser        | Leu        | Gly        | Leu        | Ile<br>95 | Phe        |
| Ala        | Leu        | Thr        | Leu<br>100 | Asn       | Arg        | His        | Lys        | Tyr<br>105 | Pro       | Leu        | Asn        | Leu        | Tyr<br>110 | Leu       | Leu        |
| Phe        | Gly        | Phe<br>115 | Thr        | Leu       | Leu        | Glu        | Ala<br>120 | Leu        | Thr       | Val        | Ala        | Val<br>125 | Val        | Val       | Thr        |
| Phe        | Tyr<br>130 | Asp        | Val        | Tyr       | Ile        | Ile<br>135 | Leu        | Gln        | Ala       | Phe        | Ile<br>140 | Leu        | Thr        | Thr       | Thr        |
| Val<br>145 | Phe        | Phe        | Gly        | Leu       | Thr<br>150 | Val        | Tyr        | Thr        | Leu       | Gln<br>155 | Ser        | Lys        | Lys        | Asp       | Phe<br>160 |



|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser        | Lys        | Phe        | Gly        | Ala<br>165 | Gly        | Leu        | Phe        | Ala        | Leu<br>170 | Leu        | Trp        | Ile        | Leu        | Cys<br>175 | Leu        |
| Ser        | Gly        | Phe        | Leu<br>180 | Lys        | Phe        | Phe        | Phe        | Tyr<br>185 | Ser        | Glu        | Ile        | Met        | Glu<br>190 | Leu        | Val        |
| Leu        | Ala        | Ala<br>195 | Ala        | Gly        | Ala        | Leu        | Leu<br>200 | Phe        | Cys        | Gly        | Phe        | Ile<br>205 | Ile        | Tyr        | Asp        |
| Thr        | His<br>210 | Ser        | Leu        | Met        | His        | Lys<br>215 | Leu        | Ser        | Pro        | Glu        | Glu<br>220 | Tyr        | Val        | Leu        | Ala        |
| Ala<br>225 | Ile        | Ser        | Leu        | Tyr        | Leu<br>230 | Asp        | Ile        | Ile        | Asn        | Leu<br>235 | Phe        | Leu        | His        | Leu        | Leu<br>240 |
| Arg        | Phe        | Leu        | Glu        | Ala<br>245 | Val        | Asn        | Lys        | Lys        |            |            |            |            |            |            |            |

<210> 254  
 <211> 151  
 <212> PRT  
 <213> homo sapiens  
 <400> 254

|           |            |            |            |           |           |            |            |            |           |           |            |            |            |           |           |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Arg<br>1  | Lys        | Lys        | Gly        | Glu<br>5  | Thr       | Glu        | Arg        | Glu        | Leu<br>10 | Ser       | Ala        | Ser        | Thr        | Gln<br>15 | Thr       |
| Leu       | Ser        | His        | Leu<br>20  | Gln       | Gly       | His        | Leu        | Pro<br>25  | Ser       | Trp       | Pro        | Arg        | Pro<br>30  | Ala       | Pro       |
| Thr       | Val        | Thr<br>35  | Ser        | Ala       | Ser       | Arg        | Arg<br>40  | Phe        | Ile       | Ile       | Lys        | Lys<br>45  | Asn        | Gln       | Lys       |
| Gln       | Ser<br>50  | Gln        | Asn        | Gln       | Asn       | Lys<br>55  | Ile        | Gln        | Lys       | Glu       | Lys<br>60  | Thr        | Trp        | Gly       | Asn       |
| Gly<br>65 | Met        | Arg        | Lys        | Arg       | Gly<br>70 | Gly        | Glu        | Glu        | Gly       | Arg<br>75 | Arg        | Ala        | Gly        | Leu       | Trp<br>80 |
| Met       | His        | Asn        | Ser        | Arg<br>85 | Ala       | Arg        | Gly        | Leu        | Gly<br>90 | Arg       | Lys        | Ile        | Pro        | Gln<br>95 | Arg       |
| Pro       | Ala        | Ala        | Cys<br>100 | Val       | Ala       | Leu        | Ala        | Arg<br>105 | His       | Val       | Val        | Phe        | Gly<br>110 | Gly       | Arg       |
| Leu       | Pro        | Ile<br>115 | His        | Pro       | Val       | Glu        | Ile<br>120 | Leu        | Val       | Ala       | Gly        | Leu<br>125 | Leu        | Gly       | Gly       |
| Val       | Lys<br>130 | Pro        | Val        | Ser       | Asp       | Arg<br>135 | Gln        | Ala        | Gly       | Lys       | Gly<br>140 | Leu        | Gly        | Asp       | Gly       |

Gly Cys Gly Arg Glu Arg Val  
145 150

<210> 255  
<211> 150  
<212> PRT  
<213> homo sapiens

<400> 255

|            |            |            |            |           |            |            |            |            |           |           |            |            |            |           |           |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Arg<br>1   | His        | Ala        | Gly        | Gly<br>5  | Gly        | Ala        | Leu        | Gly        | Asn<br>10 | Leu       | Pro        | Pro        | Gln        | Pro<br>15 | Pro       |
| Gly        | Ser        | Gly        | Val<br>20  | Met       | His        | Pro        | Glu        | Thr<br>25  | Cys       | Pro       | Ser        | Thr        | Phe<br>30  | Leu       | Ala       |
| Ser        | Pro        | Leu<br>35  | Pro        | His       | Ser        | Ile        | Ala<br>40  | Pro        | Gly       | Leu       | Phe        | Leu<br>45  | Leu        | Asp       | Phe       |
| Val        | Leu<br>50  | Val        | Leu        | Ala       | Leu        | Phe<br>55  | Leu        | Ile        | Phe       | Phe       | Tyr<br>60  | Tyr        | Gln        | Ser       | Pro       |
| Gly<br>65  | Arg        | Arg        | Gly        | Asp       | Ser<br>70  | Gly        | Ser        | Trp        | Pro       | Gly<br>75 | Pro        | Gly        | Arg        | Gln       | Val<br>80 |
| Ala        | Leu        | Glu        | Met        | Gly<br>85 | Lys        | Cys        | Leu        | Cys        | Arg<br>90 | Gly       | Ala        | Glu        | Leu        | Ser<br>95 | Leu       |
| Cys        | Phe        | Ser        | Phe<br>100 | Phe       | Pro        | Leu        | Leu        | Leu<br>105 | Pro       | Leu       | His        | Thr        | Pro<br>110 | Val       | Ala       |
| Gly        | Arg        | Asn<br>115 | Leu        | Gly       | Phe        | Pro        | Glu<br>120 | Ser        | Leu       | Gly       | Val        | Pro<br>125 | Pro        | Phe       | Leu       |
| Pro        | His<br>130 | Pro        | Gly        | Gly       | Thr        | Pro<br>135 | Arg        | Ala        | Pro       | Gly       | Leu<br>140 | Phe        | Leu        | Leu       | Leu       |
| Phe<br>145 | Ser        | Phe        | Trp        | Ala       | Val<br>150 |            |            |            |           |           |            |            |            |           |           |

<210> 256  
<211> 275  
<212> PRT  
<213> homo sapiens

<400> 256

|          |     |           |           |          |     |     |           |           |           |     |     |           |           |           |     |
|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Gly<br>1 | Arg | Pro       | Gly       | Gln<br>5 | Ser | Pro | Ala       | Gly       | Ala<br>10 | Glu | Glu | Pro       | Gly       | Pro<br>15 | Arg |
| Asp      | Ser | Ser       | Ala<br>20 | Val      | Ile | Thr | Gln       | Ile<br>25 | Ser       | Lys | Glu | Glu       | Ala<br>30 | Arg       | Gly |
| Pro      | Leu | Arg<br>35 | Gly       | Lys      | Gly | Asp | Gln<br>40 | Lys       | Ser       | Ala | Ala | Ser<br>45 | Gln       | Lys       | Pro |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg        | Ser<br>50  | Arg        | Gly        | Ile        | Leu        | His<br>55  | Ser        | Leu        | Phe        | Cys        | Cys<br>60  | Val        | Cys        | Arg        | Asp        |
| Asp<br>65  | Gly        | Glu        | Ala        | Leu        | Pro<br>70  | Ala        | His        | Ser        | Gly        | Ala<br>75  | Pro        | Leu        | Leu        | Val        | Glu<br>80  |
| Glu        | Asn        | Gly        | Ala        | Ile<br>85  | Pro        | Lys        | Thr        | Pro        | Val<br>90  | Gln        | Tyr        | Leu        | Leu        | Pro<br>95  | Glu        |
| Ala        | Lys        | Ala        | Gln<br>100 | Asp        | Ser        | Asp        | Lys        | Ile<br>105 | Cys        | Val        | Val        | Ile        | Asp<br>110 | Leu        | Asp        |
| Glu        | Thr        | Leu<br>115 | Val        | His        | Ser        | Ser        | Phe<br>120 | Lys        | Pro        | Val        | Asn        | Asn<br>125 | Ala        | Asp        | Phe        |
| Ile        | Ile<br>130 | Pro        | Val        | Glu        | Ile        | Asp<br>135 | Gly        | Val        | Val        | His        | Gln<br>140 | Val        | Tyr        | Val        | Leu        |
| Lys<br>145 | Arg        | Pro        | His        | Val        | Asp<br>150 | Glu        | Phe        | Leu        | Gln        | Arg<br>155 | Met        | Gly        | Glu        | Leu        | Phe<br>160 |
| Glu        | Cys        | Val        | Leu        | Phe<br>165 | Thr        | Ala        | Ser        | Leu        | Ala<br>170 | Lys        | Tyr        | Ala        | Asp        | Pro<br>175 | Val        |
| Ala        | Asp        | Leu        | Leu<br>180 | Asp        | Lys        | Trp        | Gly        | Ala<br>185 | Phe        | Arg        | Ala        | Arg        | Leu<br>190 | Phe        | Arg        |
| Glu        | Ser        | Cys<br>195 | Val        | Phe        | His        | Arg        | Gly<br>200 | Asn        | Tyr        | Val        | Lys        | Asp<br>205 | Leu        | Ser        | Arg        |
| Leu        | Gly<br>210 | Arg        | Asp        | Leu        | Arg        | Arg<br>215 | Val        | Leu        | Ile        | Leu        | Asp<br>220 | Asn        | Ser        | Pro        | Ala        |
| Ser<br>225 | Tyr        | Val        | Phe        | His        | Pro<br>230 | Asp        | Asn        | Ala        | Val        | Pro<br>235 | Val        | Ala        | Ser        | Trp        | Phe<br>240 |
| Asp        | Asn        | Met        | Ser        | Asp<br>245 | Thr        | Glu        | Leu        | His        | Asp<br>250 | Leu        | Leu        | Pro        | Phe        | Phe<br>255 | Glu        |
| Gln        | Leu        | Ser        | Arg<br>260 | Val        | Asp        | Asp        | Val        | Tyr<br>265 | Ser        | Val        | Leu        | Arg        | Gln<br>270 | Pro        | Arg        |
| Pro        | Gly        | Ser<br>275 |            |            |            |            |            |            |            |            |            |            |            |            |            |

&lt;210&gt; 257

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 257

|           |            |            |            |           |           |            |            |            |           |           |           |            |            |           |           |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Met<br>1  | Phe        | Tyr        | Leu        | Ala<br>5  | Ala       | Ala        | Val        | Ser        | Asp<br>10 | Phe       | Tyr       | Val        | Pro        | Val<br>15 | Ser       |
| Glu       | Met        | Pro        | Glu<br>20  | His       | Lys       | Ile        | Gln        | Ser<br>25  | Ser       | Gly       | Gly       | Pro        | Leu<br>30  | Gln       | Ile       |
| Thr       | Met        | Lys<br>35  | Met        | Val       | Pro       | Lys        | Leu<br>40  | Leu        | Ser       | Pro       | Leu       | Val<br>45  | Lys        | Asp       | Trp       |
| Ala       | Pro<br>50  | Lys        | Ala        | Phe       | Ile       | Ile<br>55  | Ser        | Phe        | Lys       | Leu       | Glu<br>60 | Thr        | Asp        | Pro       | Ala       |
| Ile<br>65 | Val        | Ile        | Asn        | Arg       | Ala<br>70 | Arg        | Lys        | Ala        | Leu       | Glu<br>75 | Ile       | Tyr        | Gln        | His       | Gln<br>80 |
| Val       | Val        | Val        | Ala        | Asn<br>85 | Ile       | Leu        | Glu        | Ser        | Arg<br>90 | Gln       | Ser       | Phe        | Val        | Phe<br>95 | Ile       |
| Val       | Thr        | Lys        | Asp<br>100 | Ser       | Glu       | Thr        | Lys        | Leu<br>105 | Leu       | Leu       | Ser       | Glu        | Glu<br>110 | Glu       | Ile       |
| Glu       | Lys        | Gly<br>115 | Val        | Glu       | Ile       | Glu        | Glu<br>120 | Lys        | Ile       | Val       | Asp       | Asn<br>125 | Leu        | Gln       | Ser       |
| Arg       | His<br>130 | Thr        | Ala        | Phe       | Ile       | Gly<br>135 | Asp        | Arg        | Asn       |           |           |            |            |           |           |

&lt;210&gt; 258

&lt;211&gt; 237

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 258

|           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Pro<br>1  | Tyr       | Arg       | Gln       | Gly<br>5  | Cys       | Pro       | Gly       | Ala       | Ala<br>10 | Gly       | Gln       | Ala       | Pro       | Gly<br>15 | Ala       |
| Pro       | Pro       | Gly       | Ser<br>20 | Tyr       | Tyr       | Pro       | Gly       | Leu<br>25 | Pro       | Ser       | Gly       | Thr       | Pro<br>30 | Gly       | Gly       |
| Pro       | Tyr       | Gly<br>35 | Gly       | Ala       | Ala       | Pro       | Gly<br>40 | Gly       | Pro       | Tyr       | Gly       | Gln<br>45 | Pro       | Pro       | Pro       |
| Ser       | Ser<br>50 | Tyr       | Gly       | Ala       | Gln       | Gln<br>55 | Pro       | Gly       | Leu       | Tyr       | Gly<br>60 | Gln       | Gly       | Gly       | Ala       |
| Pro<br>65 | Pro       | Asn       | Val       | Asp       | Pro<br>70 | Glu       | Ala       | Tyr       | Ser       | Trp<br>75 | Phe       | Gln       | Ser       | Val       | Asp<br>80 |
| Ser       | Asp       | His       | Ser       | Gly<br>85 | Tyr       | Ile       | Ser       | Met       | Lys<br>90 | Glu       | Leu       | Lys       | Gln       | Ala<br>95 | Leu       |

|                    |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val                | Asn        | Cys        | Asn<br>100 | Trp        | Ser        | Ser        | Phe        | Asn<br>105 | Asp        | Glu        | Thr        | Cys        | Leu<br>110 | Met        | Met        |
| Ile                | Asn        | Met<br>115 | Phe        | Asp        | Lys        | Thr        | Lys<br>120 | Ser        | Gly        | Arg        | Ile        | Asp<br>125 | Val        | Tyr        | Gly        |
| Phe                | Ser<br>130 | Ala        | Leu        | Trp        | Lys        | Phe<br>135 | Ile        | Gln        | Gln        | Trp        | Lys<br>140 | Asn        | Leu        | Phe        | Gln        |
| Gln<br>145         | Tyr        | Asp        | Arg        | Asp        | Arg<br>150 | Ser        | Gly        | Ser        | Ile        | Ser<br>155 | Tyr        | Thr        | Glu        | Leu        | Gln<br>160 |
| Gln                | Ala        | Leu        | Ser        | Gln<br>165 | Met        | Gly        | Tyr        | Asn        | Leu<br>170 | Ser        | Pro        | Gln        | Phe        | Thr<br>175 | Gln        |
| Leu                | Leu        | Val        | Ser<br>180 | Arg        | Tyr        | Cys        | Pro        | Arg<br>185 | Ser        | Ala        | Asn        | Pro        | Ala<br>190 | Met        | Gln        |
| Leu                | Asp        | Arg<br>195 | Phe        | Ile        | Gln        | Val        | Cys<br>200 | Thr        | Gln        | Leu        | Gln        | Val<br>205 | Leu        | Thr        | Glu        |
| Ala                | Phe<br>210 | Arg        | Glu        | Lys        | Asp        | Thr<br>215 | Ala        | Val        | Gln        | Gly        | Asn<br>220 | Ile        | Arg        | Leu        | Ser        |
| Phe<br>225         | Glu        | Asp        | Phe        | Val        | Thr<br>230 | Met        | Thr        | Ala        | Ser        | Arg<br>235 | Met        | Leu        |            |            |            |
| <210> 259          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <211> 110          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <212> PRT          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <213> homo sapiens |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <400> 259          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Thr<br>1           | Asn        | Ile        | Cys        | Leu<br>5   | Leu        | Ser        | Gly        | Ala        | Ser<br>10  | Pro        | Lys        | Val        | Thr        | Asn<br>15  | Gly        |
| Trp                | Ala        | Gln        | Ile<br>20  | Asn        | Phe        | Ser        | Phe        | Ala<br>25  | Ser        | His        | Arg        | Val        | Ala<br>30  | His        | Cys        |
| Gly                | Lys        | Pro<br>35  | Glu        | Leu        | Val        | Arg        | Thr<br>40  | Pro        | Val        | Cys        | Val        | Phe<br>45  | Leu        | Ile        | His        |
| Thr                | Asn<br>50  | His        | Asn        | Lys        | Gln        | Val<br>55  | Cys        | Thr        | His        | Leu        | Tyr<br>60  | Glu        | Pro        | His        | Ala        |
| Lys<br>65          | Thr        | Arg        | His        | Ser        | Gln<br>70  | Arg        | Ser        | Val        | Thr        | Arg<br>75  | Val        | Gln        | Gln        | Arg        | Asn<br>80  |
| Ser                | Arg        | Phe        | Asp        | Gln<br>85  | Asn        | Arg        | Pro        | Cys        | Cys<br>90  | Leu        | Leu        | Asn        | Cys        | Gln<br>95  | Leu        |

Pro Leu Lys Asn Leu Gln Lys Lys Gly His Tyr Lys Asn Ser  
 100 105 110

<210> 260  
 <211> 33  
 <212> PRT  
 <213> homo sapiens

<400> 260

Phe Val Lys Ile Leu Lys Phe Gly Pro Leu Arg Ile Ile Leu Asn Glu  
 1 5 10 15

Ile Tyr Arg Leu Thr Cys Glu Asn Ile Phe His Arg Leu Ser Leu Gly  
 20 25 30

Leu Phe Ile Arg Lys Leu Phe Val Cys Pro Pro Val Gly Thr Phe Gly  
 35 40 45

Tyr Leu Ile Leu Pro Phe Gln Ile Val Lys Ala His Arg Gly Val Phe  
 50 55 60

Trp Asn His Leu Leu Ser His Phe Leu Lys Ser Tyr Ser Ile Val Ser  
 65 70 75 80

Val Asn Ile

<210> 261  
 <211> 196  
 <212> PRT  
 <213> homo sapiens

<400> 261

Pro Gln Thr Thr Gln Cys Val Arg Arg Ala Gly Leu Trp Val Asn Ser  
 1 5 10 15

His Ile His Thr Gln Gly Arg Gly Lys His Thr Gln Val Gln Ser Ser  
 20 25 30

Gln Trp Cys Arg Pro Asp Leu Leu Ser Arg Gly Cys Tyr Gly Cys Pro  
 35 40 45

Ser Ala Ser Pro Glu Gln Pro Gly Gln Pro Ala Pro Pro Pro Arg Leu  
 50 55 60

Kxx Gln Glu Gly Glu Leu Cys Pro Gly Glu Glu Thr Asp Arg Leu Gly  
 65 70 75 80

Asp Lys Thr Pro Ile Ala Gly Thr Cys Thr Ala Ala Ala Thr Ala Pro  
 85 90 95

Arg Thr Gly His Gly Asp Gly Thr Gly Arg Glu Pro His Cys Pro Leu  
 100 105 110

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser        | Val        | Cys<br>115 | Leu        | Trp        | Phe        | Cys        | Pro<br>120 | Gly        | Pro        | Ala        | His        | Leu<br>125 | Glu        | Pro        | Arg        |
| Gln        | Thr<br>130 | Gly        | Gly        | Ile        | Glu        | Gln<br>135 | Gly        | Pro        | Gly        | Pro        | Asp<br>140 | Ser        | Pro        | Leu        | Ala        |
| Arg<br>145 | Cys        | Asp        | Trp        | Lys        | Arg<br>150 | Leu        | Met        | Pro        | Gly        | Gln<br>155 | His        | Gln        | Ala        | Phe        | Cys<br>160 |
| Lys        | Ser        | Gln        | Ser        | Gln<br>165 | Cys        | Ala        | Glu        | Ser        | Ala<br>170 | Ser        | Thr        | Ala        | Cys        | Ala<br>175 | Val        |
| Ala        | Pro        | Gln        | Asp<br>180 | Glu        | Val        | Thr        | Ser        | Arg<br>185 | Thr        | Gly        | Gly        | Phe        | Met<br>190 | Gln        | Thr        |
| His        | Arg        | His<br>195 | Cys        |            |            |            |            |            |            |            |            |            |            |            |            |

<210> 262  
 <211> 190  
 <212> PRT  
 <213> homo sapiens  
 <400> 262

|           |            |            |            |           |           |            |            |            |           |           |           |            |            |           |           |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Asp<br>1  | Gln        | Leu        | Gly        | Ser<br>5  | Gly       | Gly        | His        | Phe        | Ser<br>10 | Leu       | His       | Arg        | Leu        | Pro<br>15 | Glu       |
| Gln       | Thr        | Glu        | Glu<br>20  | Ser       | Ser       | Leu        | Ile        | Val<br>25  | Ala       | Glu       | Pro       | Ser        | Leu<br>30  | Ser       | Pro       |
| Ser       | Ala        | Val<br>35  | Ser        | Val       | Cys       | Leu        | His<br>40  | Lys        | Pro       | Ser       | Cys       | Pro<br>45  | Gly        | Arg       | Asp       |
| Phe       | Ile<br>50  | Leu        | Arg        | Ser       | His       | Ser<br>55  | Thr        | Gly        | Arg       | Ala       | Gly<br>60 | Thr        | Phe        | Cys       | Thr       |
| Leu<br>65 | Ala        | Leu        | Gly        | Leu       | Ala<br>70 | Glu        | Gly        | Leu        | Val       | Leu<br>75 | Pro       | Trp        | His        | Gln       | Pro<br>80 |
| Leu       | Pro        | Val        | Thr        | Ser<br>85 | Gly       | Gln        | Arg        | Ala        | Val<br>90 | Trp       | Thr       | Trp        | Ala        | Leu<br>95 | Leu       |
| Asn       | Ala        | Thr        | Cys<br>100 | Leu       | Pro       | Gly        | Leu        | Gln<br>105 | Val       | Gly       | Arg       | Thr        | Arg<br>110 | Thr       | Glu       |
| Pro       | Gln        | Ala<br>115 | His        | Thr       | Glu       | Gly        | Ala<br>120 | Val        | Trp       | Leu       | Pro       | Ala<br>125 | Cys        | Pro       | Ile       |
| Pro       | Met<br>130 | Pro        | Arg        | Pro       | Arg       | Gly<br>135 | Cys        | Gly        | Cys       | Cys       | Cys       | Ala        | Cys        | Pro       | Cys       |

|            |     |     |            |            |            |     |     |            |            |            |     |     |            |            |            |
|------------|-----|-----|------------|------------|------------|-----|-----|------------|------------|------------|-----|-----|------------|------------|------------|
| Asp<br>145 | Gly | Ser | Leu        | Val        | Ser<br>150 | Gln | Pro | Val        | Ser        | Phe<br>155 | Leu | Pro | Arg        | Ala        | Glu<br>160 |
| Leu        | Pro | Phe | Leu        | Kxx<br>165 | Glu        | Ser | Gly | Arg        | Arg<br>170 | Cys        | Arg | Leu | Ser        | Trp<br>175 | Leu        |
| Leu        | Trp | Gly | Ser<br>180 | Arg        | Gly        | Thr | Ala | Ile<br>185 | Thr        | Pro        | Pro | Gly | Gln<br>190 |            |            |

<210> 263  
 <211> 244  
 <212> PRT  
 <213> homo sapiens  
 <400> 263

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Glu<br>1   | Lys        | Met        | Glu        | Ala<br>5   | Phe        | Gly        | Glu        | Gly        | Ala<br>10  | Gly        | Trp        | Glu        | Asp        | Phe<br>15  | Phe        |
| Ser        | Thr        | Gln        | Thr<br>20  | Leu        | Thr        | Phe        | Gln        | Ser<br>25  | Ile        | Leu        | Gln        | Met        | Lys<br>30  | Asn        | Ala        |
| Asp        | Tyr        | Phe<br>35  | Ser        | Asn        | Tyr        | Val        | Thr<br>40  | Glu        | Asp        | Phe        | Thr        | Thr<br>45  | Tyr        | Ile        | Asn        |
| Arg        | Lys<br>50  | Arg        | Lys        | Asn        | Asn        | Cys<br>55  | His        | Gly        | Asn        | His        | Ile<br>60  | Glu        | Met        | Gln        | Ala        |
| Met<br>65  | Ala        | Glu        | Met        | Tyr        | Asn<br>70  | Arg        | Pro        | Val        | Glu        | Val<br>75  | Tyr        | Gln        | Tyr        | Ser        | Thr<br>80  |
| Glu        | Pro        | Ile        | Asn        | Thr<br>85  | Phe        | His        | Gly        | Ile        | His<br>90  | Gln        | Asn        | Glu        | Asp        | Glu<br>95  | Pro        |
| Ile        | Arg        | Val        | Ser<br>100 | Tyr        | His        | Arg        | Asn        | Ile<br>105 | His        | Tyr        | Asn        | Ser        | Val<br>110 | Val        | Asn        |
| Pro        | Asn        | Lys<br>115 | Ala        | Thr        | Ile        | Gly        | Val<br>120 | Gly        | Leu        | Gly        | Leu        | Pro<br>125 | Ser        | Phe        | Lys        |
| Pro        | Gly<br>130 | Phe        | Ala        | Glu        | Gln        | Ser<br>135 | Leu        | Met        | Lys        | Asn        | Ala<br>140 | Ile        | Lys        | Thr        | Ser        |
| Glu<br>145 | Glu        | Ser        | Trp        | Ile        | Glu<br>150 | Gln        | Gln        | Met        | Leu        | Glu<br>155 | Asp        | Lys        | Lys        | Arg        | Ala<br>160 |
| Thr        | Asp        | Trp        | Glu        | Ala<br>165 | Thr        | Asn        | Glu        | Ala        | Ile<br>170 | Glu        | Glu        | Gln        | Val        | Ala<br>175 | Arg        |
| Glu        | Ser        | Tyr        | Leu<br>180 | Gln        | Trp        | Leu        | Arg        | Asp<br>185 | Gln        | Glu        | Lys        | Gln        | Ala<br>190 | Arg        | Gln        |



|                    |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val                | Arg        | Gly<br>195 | Pro        | Ser        | Gln        | Pro        | Arg<br>200 | Lys        | Ala        | Ser        | Ala        | Thr<br>205 | Cys        | Ser        | Ser        |
| Ala                | Thr<br>210 | Ala        | Ala        | Ala        | Ser        | Ser<br>215 | Gly        | Leu        | Glu        | Glu        | Trp<br>220 | Thr        | Ser        | Arg        | Ser        |
| Pro<br>225         | Arg        | Gln        | Gly        | Val        | Gln<br>230 | Pro        | Arg        | His        | Leu        | Ser<br>235 | Thr        | Leu        | Ser        | Cys        | Met<br>240 |
| Leu Asn Trp Ala    |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <210> 264          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <211> 220          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <212> PRT          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <213> homo sapiens |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| <400> 264          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Gly<br>1           | Phe        | Arg        | Pro        | Ala<br>5   | Arg        | Cys        | Asp        | Pro        | Val<br>10  | Pro        | Leu        | Pro        | Thr        | Thr<br>15  | Arg        |
| Ser                | Val        | Ala        | Gly<br>20  | Leu        | Pro        | Val        | Gly        | Arg<br>25  | Val        | Arg        | Gln        | Leu        | Ser<br>30  | Arg        | Pro        |
| Leu                | Leu        | Gly<br>35  | Pro        | Asp        | Thr        | Gly        | Ser<br>40  | Val        | Ala        | Asn        | Ile        | Phe<br>45  | Lys        | Gly        | Leu        |
| Val                | Ile<br>50  | Leu        | Pro        | Glu        | Met        | Ser<br>55  | Leu        | Val        | Ile        | Arg        | Asn<br>60  | Leu        | Gln        | Arg        | Val        |
| Ile<br>65          | Pro        | Ile        | Arg        | Arg        | Ala<br>70  | Pro        | Leu        | Arg        | Ser        | Lys<br>75  | Ile        | Glu        | Ile        | Val        | Arg<br>80  |
| Arg                | Ile        | Leu        | Gly        | Val<br>85  | Gln        | Lys        | Phe        | Asp        | Leu<br>90  | Gly        | Ile        | Ile        | Cys        | Val<br>95  | Asp        |
| Asn                | Lys        | Asn        | Ile<br>100 | Gln        | His        | Ile        | Asn        | Arg<br>105 | Ile        | Tyr        | Arg        | Asp        | Arg<br>110 | Asn        | Val        |
| Pro                | Thr        | Asp<br>115 | Val        | Leu        | Ser        | Phe        | Pro<br>120 | Phe        | His        | Glu        | His        | Leu<br>125 | Lys        | Ala        | Gly        |
| Glu                | Phe<br>130 | Pro        | Gln        | Pro        | Asp        | Phe<br>135 | Pro        | Asp        | Asp        | Tyr        | Asn<br>140 | Leu        | Gly        | Asp        | Ile        |
| Phe<br>145         | Leu        | Gly        | Val        | Glu        | Tyr<br>150 | Ile        | Phe        | His        | Gln        | Cys<br>155 | Lys        | Glu        | Asn        | Glu        | Asp<br>160 |
| Tyr                | Asn        | Asp        | Val        | Leu<br>165 | Thr        | Val        | Thr        | Ala        | Thr<br>170 | His        | Gly        | Leu        | Cys        | His<br>175 | Leu        |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Phe | Thr | His | Gly | Thr | Glu | Ala | Glu | Trp | Gln | Gln | Met | Phe | Gln |
|     |     |     | 130 |     |     |     |     | 135 |     |     |     |     | 130 |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Lys | Ala | Val | Leu | Asp | Glu | Leu | Gly | Arg | Arg | Thr | Gly | Thr | Arg |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gln | Ala | Leu | Thr | Arg | Gly | Leu | Phe | Gly | Gly | Ser |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |

&lt;210&gt; 265

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 265

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Leu | Arg | Ser | Phe | Val | Ile | Tyr | Leu | Cys | Ala | Thr | Pro | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Ser | Leu | His | Pro | Ser | Arg | Val | Pro | Leu | Ser | Glu | Gly | Thr | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Ala | Pro | Ser | Glu | Glu | Ala | Pro | Gly | Gln | Gly | Leu | Gln | Pro | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Ala | Ser | Ala | Gln | Leu | Val | Gln | His | Arg | Leu | Leu | Leu | Leu | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Leu | Leu | Pro | Leu | Cys | Leu | Arg | Ala | Val | Cys | Glu | Ser | Gln | Gln | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Glu | Ser | Val | Gly | Gly | Arg | His | Ser | Gln | Asp | Val | Ile | Val | Ile | Phe |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Phe | Phe | Thr | Leu | Met | Glu | Asp | Ile | Leu | His | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |

&lt;210&gt; 266

&lt;211&gt; 371

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 266

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Phe | Arg | Lys | Val | Asn | Ile | Ile | Ile | Leu | Val | Leu | Ala | Val | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Leu | Leu | Val | Leu | His | His | Asn | Phe | Leu | Ser | Leu | Ser | Ser | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Asn | Glu | Val | Thr | Asp | Ser | Gly | Ile | Val | Gly | Pro | Gln | Pro | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Phe | Val | Pro | Asn | Ala | Leu | Arg | His | Ala | Val | Asp | Gly | Arg | Gln | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Glu<br>65  | Ile        | Pro        | Val        | Val        | Ile<br>70  | Ala        | Ala        | Ser        | Glu        | Asp<br>75  | Arg        | Leu        | Gly        | Gly        | Ala<br>80  |
| Ile        | Ala        | Ala        | Ile        | Asn<br>85  | Ser        | Ile        | Gln        | His        | Asn<br>90  | Thr        | Arg        | Ser        | Asn        | Val<br>95  | Ile        |
| Phe        | Tyr        | Ile        | Val<br>100 | Thr        | Leu        | Asn        | Asn        | Thr<br>105 | Ala        | Asp        | His        | Leu        | Arg<br>110 | Ser        | Trp        |
| Leu        | Asn        | Ser<br>115 | Asp        | Ser        | Leu        | Lys        | Ser<br>120 | Ile        | Arg        | Tyr        | Lys        | Ile<br>125 | Val        | Asn        | Phe        |
| Asp        | Pro<br>130 | Lys        | Leu        | Leu        | Glu        | Gly<br>135 | Lys        | Val        | Lys        | Glu        | Asp<br>140 | Pro        | Asp        | Gln        | Gly        |
| Glu<br>145 | Ser        | Met        | Lys        | Pro        | Leu<br>150 | Thr        | Phe        | Ala        | Arg        | Phe<br>155 | Tyr        | Leu        | Pro        | Ile        | Leu<br>160 |
| Val        | Pro        | Ser        | Ala        | Lys<br>165 | Lys        | Ala        | Ile        | Tyr        | Met<br>170 | Asp        | Asp        | Asp        | Val        | Ile<br>175 | Val        |
| Gln        | Gly        | Asp        | Ile<br>180 | Leu        | Ala        | Leu        | Tyr        | Asn<br>185 | Thr        | Ala        | Leu        | Lys        | Pro<br>190 | Gly        | His        |
| Ala        | Ala        | Ala<br>195 | Phe        | Ser        | Glu        | Asp        | Cys<br>200 | Asp        | Ser        | Ala        | Ser        | Thr<br>205 | Lys        | Val        | Val        |
| Ile        | Arg<br>210 | Gly        | Ala        | Gly        | Asn        | Gln<br>215 | Tyr        | Asn        | Tyr        | Ile        | Gly<br>220 | Tyr        | Leu        | Asp        | Tyr        |
| Lys<br>225 | Lys        | Glu        | Arg        | Ile        | Arg<br>230 | Lys        | Leu        | Ser        | Met        | Lys<br>235 | Ala        | Ser        | Thr        | Cys        | Ser<br>240 |
| Phe        | Asn        | Pro        | Gly        | Val<br>245 | Phe        | Val        | Ala        | Asn        | Leu<br>250 | Thr        | Glu        | Trp        | Lys        | Arg<br>255 | Gln        |
| Asn        | Ile        | Thr        | Asn<br>260 | Gln        | Leu        | Glu        | Lys        | Trp<br>265 | Met        | Lys        | Leu        | Asn        | Val<br>270 | Glu        | Glu        |
| Gly        | Leu        | Tyr<br>275 | Ser        | Arg        | Thr        | Leu        | Ala<br>280 | Gly        | Ser        | Ile        | Thr        | Thr<br>285 | Pro        | Pro        | Leu        |
| Leu        | Ile<br>290 | Val        | Phe        | Tyr        | Gln        | Gln<br>295 | His        | Ser        | Thr        | Ile        | Asp<br>300 | Pro        | Met        | Trp        | Asn        |
| Val<br>305 | Arg        | His        | Leu        | Gly        | Ser<br>310 | Ser        | Ala        | Gly        | Lys        | Arg<br>315 | Tyr        | Ser        | Pro        | Gln        | Phe<br>320 |

|     |     |     |     |            |     |     |     |     |            |     |     |     |     |            |     |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|
| Val | Lys | Ala | Ala | Lys<br>325 | Leu | Leu | His | Trp | Asn<br>330 | Gly | His | Leu | Lys | Pro<br>335 | Trp |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|

|     |     |     |            |     |     |     |     |            |     |     |     |     |            |     |     |
|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|
| Gly | Arg | Thr | Ala<br>340 | Ser | Tyr | Thr | Asp | Val<br>345 | Trp | Glu | Lys | Trp | Tyr<br>350 | Ile | Pro |
|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|

|     |     |            |     |     |     |     |            |     |     |     |     |            |     |     |     |
|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|
| Asp | Pro | Thr<br>355 | Gly | Lys | Phe | Asn | Leu<br>360 | Ile | Arg | Arg | Tyr | Thr<br>365 | Glu | Ile | Ser |
|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|

|     |     |     |
|-----|-----|-----|
| Asn | Ile | Lys |
|     | 370 |     |

&lt;210&gt; 267

&lt;211&gt; 72

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 267

|          |     |     |     |          |     |     |     |     |           |     |     |     |     |           |     |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Met<br>1 | Cys | Leu | Leu | Ser<br>5 | Gln | Gln | Ser | Pro | Ala<br>10 | Ala | Ser | Ser | Leu | Glu<br>15 | Gly |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

|     |     |     |           |     |     |     |     |           |     |     |     |     |           |     |     |
|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|
| Ala | Ile | Trp | Arg<br>20 | Arg | Ala | Gly | Thr | Gln<br>25 | Thr | Arg | Ala | Leu | Asp<br>30 | Ala | Ile |
|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|

|     |     |           |     |     |     |     |           |     |     |     |     |           |     |     |     |
|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|
| Leu | Tyr | His<br>35 | Pro | Gln | Gln | Ser | His<br>40 | Leu | Val | Gly | Ser | Thr<br>45 | Ala | Leu | Gly |
|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|

|     |           |     |     |     |     |           |     |     |     |     |           |     |     |     |     |
|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|
| Leu | Thr<br>50 | Leu | Pro | Leu | Leu | Tyr<br>55 | Pro | Arg | Glu | Pro | Glu<br>60 | Ala | Gln | Gly | Trp |
|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|

|           |     |     |     |     |           |     |     |
|-----------|-----|-----|-----|-----|-----------|-----|-----|
| Lys<br>65 | Asp | Pro | Val | Ala | Gly<br>70 | Gly | Gly |
|-----------|-----|-----|-----|-----|-----------|-----|-----|

&lt;210&gt; 268

&lt;211&gt; 137

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 268

|          |     |     |     |          |     |     |     |     |           |     |     |     |     |           |     |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Val<br>1 | Pro | Pro | Cys | Pro<br>5 | Gln | Leu | Arg | Glu | Leu<br>10 | Cys | Pro | Gly | Val | Asn<br>15 | Asn |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

|     |     |     |           |     |     |     |     |           |     |     |     |     |           |     |     |
|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|
| Gln | Pro | Tyr | Leu<br>20 | Cys | Glu | Ser | Gly | His<br>25 | Cys | Cys | Gly | Glu | Thr<br>30 | Gly | Cys |
|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|

|     |     |           |     |     |     |     |           |     |     |     |     |           |     |     |     |
|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|
| Cys | Thr | Tyr<br>35 | Tyr | Tyr | Glu | Leu | Trp<br>40 | Trp | Phe | Trp | Leu | Leu<br>45 | Trp | Thr | Val |
|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|

|     |           |     |     |     |     |           |     |     |     |     |           |     |     |     |     |
|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|
| Leu | Ile<br>50 | Leu | Phe | Ser | Cys | Cys<br>55 | Cys | Ala | Phe | Arg | His<br>60 | Arg | Arg | Ala | Lys |
|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|

|           |     |     |     |     |           |     |     |     |     |           |     |     |     |     |           |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|
| Leu<br>65 | Arg | Leu | Gln | Gln | Gln<br>70 | Gln | Arg | Gln | Val | Glu<br>75 | Ile | Asn | Leu | Leu | Ala<br>80 |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|

|     |            |            |            |           |     |            |            |            |           |     |     |            |            |           |     |
|-----|------------|------------|------------|-----------|-----|------------|------------|------------|-----------|-----|-----|------------|------------|-----------|-----|
| Tyr | His        | Gly        | Ala        | Cys<br>35 | His | Gly        | Ala        | Gly        | Pro<br>90 | Phe | Pro | Thr        | Gly        | Ser<br>95 | Leu |
| Leu | Asp        | Leu        | Arg<br>100 | Phe       | Leu | Ser        | Thr        | Phe<br>105 | Lys       | Pro | Pro | Ala        | Tyr<br>110 | Glu       | Asp |
| Val | Val        | His<br>115 | Arg        | Pro       | Gly | Thr        | Thr<br>120 | Ser        | Pro       | Pro | Leu | Tyr<br>125 | Cys        | Gly       | Pro |
| Lys | Ala<br>130 | Pro        | Leu        | Glu       | Val | Val<br>135 | Ser        | Ser        |           |     |     |            |            |           |     |

<210> 269  
 <211> 308  
 <212> PRT  
 <213> homo sapiens  
 <400> 269

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Lys<br>1   | His        | Ala        | Thr        | Glu<br>5   | Gln        | Glu        | Lys        | Thr        | Glu<br>10  | Glu        | Gly        | Leu        | Gly        | Pro<br>15  | Asn        |
| Val        | Lys        | Gly        | Ile<br>20  | Val        | Thr        | Met        | Leu        | Met<br>25  | Leu        | Met        | Leu        | Leu        | Met<br>30  | Met        | Phe        |
| Ala        | Val        | His<br>35  | Cys        | Thr        | Trp        | Val        | Thr<br>40  | Ser        | Asn        | Ala        | Tyr        | Ser<br>45  | Ser        | Pro        | Ser        |
| Val        | Val<br>50  | Leu        | Ala        | Ser        | Tyr        | Asn<br>55  | His        | Asp        | Gly        | Thr        | Arg<br>60  | Asn        | Ile        | Leu        | Asp        |
| Asp<br>65  | Phe        | Arg        | Glu        | Ala        | Tyr<br>70  | Phe        | Trp        | Leu        | Arg        | Gln<br>75  | Asn        | Thr        | Asp        | Glu        | His<br>80  |
| Ala        | Arg        | Val        | Met        | Ser<br>85  | Trp        | Trp        | Asp        | Tyr        | Gly<br>90  | Tyr        | Gln        | Ile        | Ala        | Gly<br>95  | Met        |
| Ala        | Asn        | Arg        | Thr<br>100 | Thr        | Leu        | Val        | Asp        | Asn<br>105 | Asn        | Thr        | Trp        | Asn        | Asn<br>110 | Ser        | His        |
| Ile        | Ala        | Leu<br>115 | Val        | Gly        | Lys        | Ala        | Met<br>120 | Ser        | Ser        | Asn        | Glu        | Thr<br>125 | Ala        | Ala        | Tyr        |
| Lys        | Ile<br>130 | Met        | Arg        | Thr        | Leu        | Asp<br>135 | Val        | Asp        | Tyr        | Val        | Leu<br>140 | Val        | Ile        | Phe        | Gly        |
| Gly<br>145 | Val        | Ile        | Gly        | Tyr        | Ser<br>150 | Gly        | Asp        | Asp        | Ile        | Asn<br>155 | Lys        | Phe        | Leu        | Trp        | Met<br>160 |
| Val        | Arg        | Ile        | Ala        | Glu<br>165 | Gly        | Glu        | His        | Pro        | Lys<br>170 | Asp        | Ile        | Arg        | Glu        | Ser<br>175 | Asp        |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Tyr        | Phe        | Thr        | Pro<br>130 | Gln        | Gly        | Glu        | Phe        | Arg<br>185 | Val        | Asp        | Lys        | Ala        | Gly<br>190 | Ser        | Pro        |
| Thr        | Leu        | Leu<br>195 | Asn        | Cys        | Leu        | Met        | Tyr<br>200 | Lys        | Met        | Ser        | Tyr        | Tyr<br>205 | Arg        | Phe        | Gly        |
| Glu        | Met<br>210 | Gln        | Leu        | Asp        | Phe        | Arg<br>215 | Thr        | Pro        | Pro        | Gly        | Phe<br>220 | Asp        | Arg        | Thr        | Arg        |
| Asn<br>225 | Ala        | Glu        | Ile        | Gly        | Asn<br>230 | Lys        | Asp        | Ile        | Lys        | Phe<br>235 | Lys        | His        | Leu        | Glu        | Glu<br>240 |
| Ala        | Phe        | Thr        | Ser        | Glu<br>245 | His        | Trp        | Leu        | Val        | Arg<br>250 | Ile        | Tyr        | Lys        | Val        | Lys<br>255 | Ala        |
| Pro        | Asp        | Asn        | Arg<br>260 | Glu        | Thr        | Leu        | Asp        | His<br>265 | Lys        | Pro        | Arg        | Val        | Thr<br>270 | Asn        | Ile        |
| Phe        | Pro        | Lys<br>275 | Gln        | Lys        | Tyr        | Leu        | Ser<br>280 | Lys        | Lys        | Thr        | Thr        | Lys<br>285 | Arg        | Lys        | Arg        |
| Gly        | Tyr<br>290 | Ile        | Lys        | Asn        | Lys        | Leu<br>295 | Val        | Phe        | Lys        | Lys        | Gly<br>300 | Lys        | Lys        | Ile        | Ser        |
| Lys<br>305 | Lys        | Thr        | Val        |            |            |            |            |            |            |            |            |            |            |            |            |

<210> 270  
 <211> 113  
 <212> PRT  
 <213> homo sapiens

<400> 270

|           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ile<br>1  | Pro       | Glu       | Asp       | Pro<br>5  | His       | Ile       | Asp       | Glu       | Ser<br>10 | Lys       | Ala       | Lys       | His       | Gln<br>15 | Ala       |
| Ile       | Ile       | Met       | Ser<br>20 | Thr       | Ser       | Leu       | Arg       | Val<br>25 | Ser       | Pro       | Ser       | Ile       | His<br>30 | Gly       | Tyr       |
| His       | Phe       | Asp<br>35 | Thr       | Ala       | Ser       | Arg       | Lys<br>40 | Lys       | Ala       | Val       | Gly       | Asn<br>45 | Ile       | Phe       | Glu       |
| Asn       | Thr<br>50 | Asp       | Gln       | Glu       | Ser       | Leu<br>55 | Glu       | Arg       | Leu       | Phe       | Arg<br>60 | Asn       | Ser       | Gly       | Asp       |
| Lys<br>65 | Lys       | Ala       | Glu       | Glu       | Arg<br>70 | Ala       | Lys       | Ile       | Ile       | Phe<br>75 | Ala       | Ile       | Asp       | Gln       | Asp<br>80 |
| Val       | Glu       | Glu       | Lys       | Thr<br>85 | Arg       | Ala       | Leu       | Met       | Ala<br>90 | Leu       | Lys       | Lys       | Arg       | Thr<br>95 | Lys       |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Leu | Phe | Gln | Phe | Leu | Lys | Leu | Arg | Lys | Tyr | Ser | Ile | Lys | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

His

<210> 271  
 <211> 100  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 271

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Met | Gln | His | Phe | Ala | Ala | Thr | Leu | Gln | Ala | Ser | Leu | Leu | Ser | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Gln | Arg | Leu | Glu | Arg | Asp | Arg | Asp | Trp | Lys | Gly | Thr | Arg | Thr | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Thr | Gly | Tyr | Lys | Asp | Ser | Lys | Gln | Phe | His | Ala | Leu | Cys | Cys | Tyr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Arg | Gly | Glu | Gln | Asn | Ala | Phe | Ser | Lys | Asp | Leu | Lys | Thr | Leu | Pro | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Gln | Glu | Arg | Ile | Asp | Ala | Asp | Arg | Arg | Ala | Trp | Thr | Asp | Val | Met |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Arg | Thr | Lys | Glu | Asn | Arg | Trp | Leu | Glu | Met | Thr | Phe | Ile | Gln | Gly | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Phe | Val | Arg | Pro |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 272  
 <211> 20  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 272

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Arg | Ile | Pro | Val | Thr | Leu | Asn | Met | Lys | Met | Val | Met | Pro | Ser | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gln | Gly | Leu | Asp |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 20  |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 273  
 <211> 136  
 <212> PRT  
 <213> homo sapiens

&lt;400&gt; 273

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Pro | Pro | Val | Lys | Ala | Leu | Ile | Glu | His | Glu | Met | Lys | Asn | Gly | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Ala | Asn | Arg | Ile | Val | Leu | Gly | Gly | Phe | Ser | Gln | Gly | Gly | Ala | Leu |

20

112

25

30

|           |            |            |            |           |           |            |            |            |           |           |           |            |            |           |           |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Ser       | Leu        | Tyr<br>35  | Thr        | Ala       | Leu       | Thr        | Cys<br>40  | Pro        | His       | Pro       | Leu       | Ala<br>45  | Gly        | Ile       | Val       |
| Ala       | Leu<br>50  | Ser        | Cys        | Trp       | Leu       | Pro<br>55  | Leu        | His        | Arg       | Ala       | Phe<br>60 | Pro        | Gln        | Ala       | Ala       |
| Asn<br>65 | Gly        | Ser        | Ala        | Lys       | Asp<br>70 | Leu        | Ala        | Ile        | Leu       | Gln<br>75 | Cys       | His        | Gly        | Glu       | Leu<br>80 |
| Asp       | Pro        | Met        | Val        | Pro<br>85 | Val       | Arg        | Phe        | Gly        | Ala<br>90 | Leu       | Thr       | Ala        | Glu        | Lys<br>95 | Leu       |
| Arg       | Ser        | Val        | Val<br>100 | Thr       | Pro       | Ala        | Arg        | Val<br>105 | Gln       | Phe       | Lys       | Thr        | Tyr<br>110 | Pro       | Gly       |
| Val       | Met        | His<br>115 | Ser        | Ser       | Cys       | Pro        | Gln<br>120 | Glu        | Met       | Ala       | Ala       | Val<br>125 | Lys        | Glu       | Phe       |
| Leu       | Glu<br>130 | Lys        | Leu        | Leu       | Pro       | Pro<br>135 | Val        |            |           |           |           |            |            |           |           |

&lt;210&gt; 274

&lt;211&gt; 91

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 274

|           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Met<br>1  | Trp       | Val       | Leu       | Lys<br>5  | Leu       | Asp       | Arg       | Asn       | Thr<br>10 | Met       | Asn       | Val       | Lys       | Ile<br>15 | Pro       |
| Pro       | Ile       | Phe       | Cys<br>20 | Ser       | Lys       | Lys       | Lys       | Asn<br>25 | Pro       | Lys       | Asn       | Lys       | Lys<br>30 | Thr       | Asn       |
| Lys       | Lys       | Pro<br>35 | Arg       | Met       | Phe       | Phe       | Gly<br>40 | Ile       | Thr       | Glu       | Ile       | Ser<br>45 | Gln       | Thr       | Trp       |
| Val       | Phe<br>50 | Ser       | Tyr       | Ser       | Leu       | Cys<br>55 | Thr       | Phe       | Phe       | Gln       | Val<br>60 | Leu       | Cys       | Phe       | Ala       |
| Cys<br>65 | Ser       | Thr       | Asp       | Cys       | Val<br>70 | Ile       | Leu       | Ile       | Phe       | Ile<br>75 | Asp       | Ser       | Ser       | Leu       | Ala<br>80 |
| Met       | Gln       | Tyr       | Pro       | Cys<br>85 | Leu       | Thr       | His       | Arg       | Cys<br>90 | Leu       |           |           |           |           |           |

&lt;210&gt; 275

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 275



|           |           |           |           |          |           |           |           |           |           |           |           |           |           |           |     |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| Glu<br>1  | Thr       | Ile       | Ala       | Asp<br>5 | Asn       | Ala       | Leu       | Pro       | Ser<br>10 | Thr       | Glu       | Ile       | Thr       | Leu<br>15 | Glu |
| Ser       | Pro       | Leu       | Leu<br>20 | Gly      | Ser       | Phe       | Asp       | Cys<br>25 | Leu       | Thr       | Gln       | Asp       | Val<br>30 | Leu       | Cys |
| His       | Ser       | Glu<br>35 | Val       | Phe      | Ile       | Trp       | Gly<br>40 | Arg       | Ser       | Leu       | Tyr       | Gly<br>45 | Asp       | Val       | Asn |
| Asp       | Ser<br>50 | Val       | Ser       | Gly      | Leu       | Cys<br>55 | Ile       | Thr       | Ser       | His       | Trp<br>60 | Ser       | Glu       | Thr       | Pro |
| Val<br>65 | Cys       | Gln       | Ala       | Trp      | Ile<br>70 | Leu       | His       | Cys       | Lys       | Thr<br>75 |           |           |           |           |     |

<210> 276  
 <211> 120  
 <212> PRT  
 <213> homo sapiens

<400> 276

|           |           |            |            |           |           |           |            |            |           |           |           |           |            |           |           |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Gly<br>1  | Gly       | Lys        | Glu        | Lys<br>5  | Thr       | Lys       | Lys        | Ile        | Gln<br>10 | Leu       | Arg       | Asn       | Arg        | Thr<br>15 | Met       |
| Ile       | Gln       | His        | Leu<br>20  | Gln       | Lys       | Ala       | Ser        | Ser<br>25  | Ile       | Ser       | Leu       | Lys       | Lys<br>30  | Ala       | Thr       |
| Asp       | Cys       | Ala<br>35  | Ser        | Ala       | Gly       | Ser       | Glu<br>40  | Lys        | Gly       | Trp       | Ala       | Ala<br>45 | Gly        | Thr       | Ala       |
| Ala       | Ser<br>50 | Trp        | Val        | Thr       | Arg       | Gln<br>55 | Gln        | Ser        | Gln       | Arg       | Leu<br>60 | Gly       | Val        | Arg       | Leu       |
| Arg<br>65 | Thr       | Pro        | Leu        | Trp       | Pro<br>70 | Glu       | His        | Lys        | Arg       | His<br>75 | Trp       | His       | Cys        | Lys       | Leu<br>80 |
| Ser       | Val       | Thr        | Trp        | Pro<br>85 | Ser       | Phe       | Leu        | Ser        | Ser<br>90 | Ile       | Ser       | Pro       | Asn        | Ile<br>95 | Cys       |
| Ala       | His       | Pro        | Glu<br>100 | Glu       | Leu       | Ser       | Gly        | Asn<br>105 | Ser       | Arg       | Val       | Arg       | Ala<br>110 | Gly       | Arg       |
| Arg       | Gly       | Glu<br>115 | Arg        | Thr       | Lys       | Arg       | Glu<br>120 |            |           |           |           |           |            |           |           |

<210> 277  
 <211> 113  
 <212> PRT  
 <213> homo sapiens

<400> 277

|          |     |     |     |          |     |     |     |     |           |     |     |     |     |           |     |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Val<br>1 | Ala | Pro | Phe | Pro<br>5 | Ile | Pro | Thr | Gln | Glu<br>10 | His | Arg | Gly | Gly | Gly<br>15 | Glu |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

|           |           |           |            |           |           |           |           |            |           |           |           |           |            |           |           |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Gly       | Arg       | Leu       | Ser<br>20  | Leu       | Ser       | Lys       | Ser       | Ser<br>25  | Tyr       | Leu       | His       | Phe       | Arg<br>30  | Arg       | Lys       |
| Ala       | Glu       | Thr<br>35 | Gln        | Ser       | Arg       | Leu       | Tyr<br>40 | Ile        | Asn       | Cys       | Leu       | Ala<br>45 | Asp        | Arg       | Val       |
| Thr       | Lys<br>50 | Thr       | His        | Trp       | Ser       | Thr<br>55 | Cys       | Ala        | Phe       | Ser       | Ser<br>60 | Leu       | Cys        | Pro       | Ser       |
| Leu<br>65 | Ile       | Gln       | Thr        | Ala       | Thr<br>70 | Cys       | Gln       | Ser        | Pro       | Ala<br>75 | Thr       | Leu       | Lys        | Thr       | His<br>80 |
| Gly       | Gln       | Leu       | Pro        | Gly<br>85 | Phe       | Thr       | Lys       | Leu        | Thr<br>90 | Ala       | Phe       | Leu       | His        | Lys<br>95 | Val       |
| Lys       | Thr       | Thr       | Thr<br>100 | Ala       | Ser       | Val       | Cys       | Gly<br>105 | Pro       | Ser       | Ala       | Thr       | Thr<br>110 | Lys       | Leu       |

Ser

&lt;210&gt; 278

&lt;211&gt; 85

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 278

|           |           |           |           |          |           |           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Pro<br>1  | Tyr       | Asp       | Pro       | Ala<br>5 | Cys       | Leu       | Leu       | Ile       | Phe<br>10 | Ser       | Leu       | Pro       | Leu       | Pro<br>15 | Phe       |
| Leu       | Ser       | Leu       | Ser<br>20 | Ser      | Arg       | Ser       | His       | Leu<br>25 | Pro       | Gly       | Leu       | Lys       | Tyr<br>30 | Phe       | Val       |
| Gly       | Ile       | Ala<br>35 | Tyr       | Tyr      | Ile       | Ile       | Leu<br>40 | Ala       | Asp       | Glu       | Pro       | Gln<br>45 | Asp       | Asn       | Val       |
| Tyr       | Thr<br>50 | His       | Thr       | His      | Thr       | Tyr<br>55 | Thr       | His       | Thr       | Lys       | Ser<br>60 | Gln       | Leu       | Leu       | Lys       |
| Ser<br>65 | Gly       | Leu       | Gly       | Ile      | Arg<br>70 | Leu       | Leu       | Cys       | Pro       | Val<br>75 | Lys       | Asn       | Ser       | Cys       | Thr<br>80 |

|     |     |     |     |           |
|-----|-----|-----|-----|-----------|
| Glu | Val | Ile | Val | Thr<br>85 |
|-----|-----|-----|-----|-----------|

&lt;210&gt; 279

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 279

|          |     |     |     |          |     |     |     |     |           |     |     |     |     |           |     |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Asn<br>1 | Ser | Phe | Lys | Val<br>5 | Val | Lys | Lys | Leu | Ala<br>10 | Thr | Thr | Trp | Ser | Leu<br>15 | Ser |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

|           |           |           |           |     |     |           |           |           |     |     |           |           |           |     |     |
|-----------|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|-----|
| Ile       | Lys       | Arg       | Lys<br>20 | Gln | Gly | Lys       | Gln       | Thr<br>25 | His | Ser | Leu       | Asp       | Gln<br>30 | Lys | Lys |
| Leu       | Asp       | Gln<br>35 | Val       | His | Trp | Asn       | Gln<br>40 | Ser       | Val | Thr | Thr       | Gln<br>45 | Val       | Thr | Met |
| Thr       | Ser<br>50 | Val       | Gln       | Glu | Phe | Phe<br>55 | Thr       | Gly       | His | Arg | Ser<br>60 | Leu       | Ile       | Pro | Ser |
| Pro<br>65 | Leu       | Phe       | Asn       | Ser |     |           |           |           |     |     |           |           |           |     |     |

<210> 280  
 <211> 593  
 <212> PRT  
 <213> homo sapiens  
 <400> 280

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val<br>1   | Ser        | Glu        | Lys        | Cys<br>5   | Arg        | Ile        | Asp        | Thr        | Glu<br>10  | Ile        | Leu        | Pro        | Ser        | Leu<br>15  | Phe        |
| Met        | Arg        | Cys        | Thr<br>20  | Thr        | Asp        | Leu        | Asn        | Arg<br>25  | Lys        | Asp        | Lys        | Phe        | Pro<br>30  | Ala        | Ile        |
| Thr        | His        | Leu<br>35  | Lys        | Phe        | Leu        | Ala        | Arg<br>40  | Asp        | Met        | Ser        | Glu        | Gln<br>45  | Val        | Leu        | Leu        |
| Cys        | Ala<br>50  | Ser        | Ser        | Gln        | Thr        | Ser<br>55  | Ser        | Ile        | Val        | Glu        | Cys<br>60  | Trp        | Ser        | Leu        | Arg        |
| Lys<br>65  | Glu        | Gly        | Leu        | Pro        | Val<br>70  | Asn        | Asn        | Ile        | Phe        | Gln<br>75  | Gln        | Ile        | Ser        | Pro        | Val<br>80  |
| Val        | Gly        | Asp        | Lys        | Gln<br>85  | Pro        | Thr        | Ile        | Leu        | Lys<br>90  | Trp        | Arg        | Ile        | Leu        | Ser<br>95  | Ala        |
| Thr        | Asn        | Asp        | Leu<br>100 | Asp        | Arg        | Val        | Ser        | Ala<br>105 | Val        | Ala        | Leu        | Pro        | Lys<br>110 | Leu        | Pro        |
| Ile        | Ser        | Leu<br>115 | Thr        | Asn        | Thr        | Asp        | Leu<br>120 | Lys        | Val        | Ala        | Ser        | Asp<br>125 | Thr        | Gln        | Phe        |
| Tyr        | Pro<br>130 | Gly        | Leu        | Gly        | Leu        | Ala<br>135 | Leu        | Ala        | Phe        | His        | Asp<br>140 | Gly        | Ser        | Val        | His        |
| Ile<br>145 | Val        | His        | Arg        | Leu        | Ser<br>150 | Leu        | Gln        | Thr        | Met        | Ala<br>155 | Val        | Phe        | Tyr        | Ser        | Ser<br>160 |
| Ala        | Ala        | Pro        | Arg        | Pro<br>165 | Val        | Asp        | Glu        | Pro        | Ala<br>170 | Met        | Lys        | Arg        | Pro        | Arg<br>175 | Thr        |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala        | Gly        | Pro        | Ala<br>180 | Val        | His        | Leu        | Lys        | Ala<br>185 | Met        | Gln        | Leu        | Ser        | Trp<br>190 | Thr        | Ser        |
| Leu        | Ala        | Leu<br>195 | Val        | Gly        | Ile        | Asp        | Ser<br>200 | His        | Gly        | Lys        | Leu        | Ser<br>205 | Val        | Leu        | Arg        |
| Leu        | Ser<br>210 | Pro        | Ser        | Met        | Gly        | His<br>215 | Pro        | Leu        | Glu        | Val        | Gly<br>220 | Leu        | Ala        | Leu        | Arg        |
| His<br>225 | Leu        | Leu        | Phe        | Leu        | Leu<br>230 | Glu        | Tyr        | Cys        | Met        | Val<br>235 | Thr        | Gly        | Tyr        | Asp        | Trp<br>240 |
| Trp        | Asp        | Ile        | Leu        | Leu<br>245 | His        | Val        | Gln        | Pro        | Ser<br>250 | Met        | Val        | Gln        | Ser        | Leu<br>255 | Val        |
| Glu        | Lys        | Leu        | His<br>260 | Glu        | Glu        | Tyr        | Thr        | Arg<br>265 | Gln        | Thr        | Ala        | Ala        | Leu<br>270 | Gln        | Gln        |
| Val        | Leu        | Ser<br>275 | Thr        | Arg        | Ile        | Leu        | Ala<br>280 | Met        | Lys        | Ala        | Ser        | Leu<br>285 | Cys        | Lys        | Leu        |
| Ser        | Pro<br>290 | Cys        | Thr        | Val        | Thr        | Arg<br>295 | Val        | Cys        | Asp        | Tyr        | His<br>300 | Thr        | Lys        | Leu        | Phe        |
| Leu<br>305 | Ile        | Ala        | Ile        | Ser        | Ser<br>310 | Thr        | Leu        | Lys        | Ser        | Leu<br>315 | Leu        | Arg        | Pro        | His        | Phe<br>320 |
| Leu        | Asn        | Thr        | Pro        | Asp<br>325 | Lys        | Ser        | Pro        | Gly        | Asp<br>330 | Arg        | Leu        | Thr        | Glu        | Ile<br>335 | Cys        |
| Thr        | Lys        | Ile        | Thr<br>340 | Asp        | Val        | Asp        | Ile        | Asp<br>345 | Lys        | Val        | Met        | Ile        | Asn<br>350 | Leu        | Lys        |
| Thr        | Glu        | Glu<br>355 | Phe        | Val        | Leu        | Asp        | Met<br>360 | Asn        | Thr        | Leu        | Gln        | Ala<br>365 | Leu        | Gln        | Gln        |
| Leu        | Leu<br>370 | Gln        | Trp        | Val        | Gly        | Asp<br>375 | Phe        | Val        | Leu        | Tyr        | Leu<br>380 | Leu        | Ala        | Ser        | Leu        |
| Pro<br>385 | Asn        | Gln        | Gly        | Ser        | Leu<br>390 | Leu        | Arg        | Pro        | Gly        | His<br>395 | Ser        | Phe        | Leu        | Arg        | Asp<br>400 |
| Gly        | Thr        | Ser        | Leu        | Gly<br>405 | Met        | Leu        | Arg        | Glu        | Leu<br>410 | Met        | Val        | Val        | Ile        | Arg<br>415 | Ile        |
| Trp        | Gly        | Leu        | Leu<br>420 | Lys        | Pro        | Ser        | Cys        | Leu<br>425 | Pro        | Val        | Tyr        | Thr        | Ala<br>430 | Thr        | Ser        |

|            |            |            |            |            |            |            |                           |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|---------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp        | Thr        | Gln        | Asp        | Ser        | Met        | Ser        | Leu <sup>117</sup><br>440 | Leu        | Phe        | Arg        | Leu        | Leu<br>445 | Thr        | Lys        | Leu        |
| Trp        | Ile<br>450 | Cys        | Cys        | Arg        | Asp        | Glu<br>455 | Gly                       | Pro        | Ala        | Ser        | Glu<br>460 | Pro        | Asp        | Glu        | Ala        |
| Leu<br>465 | Val        | Asp        | Glu        | Cys        | Cys<br>470 | Leu        | Leu                       | Pro        | Ser        | Gln<br>475 | Leu        | Leu        | Ile        | Pro        | Ser<br>480 |
| Leu        | Asp        | Trp        | Leu        | Pro<br>485 | Ala        | Ser        | Asp                       | Gly        | Leu<br>490 | Val        | Ser        | Arg        | Leu        | Gln<br>495 | Pro        |
| Lys        | Gln        | Pro        | Leu<br>500 | Arg        | Leu        | Gln        | Phe                       | Gly<br>505 | Arg        | Ala        | Pro        | Thr        | Leu<br>510 | Pro        | Gly        |
| Ser        | Ala        | Ala<br>515 | Thr        | Leu        | Gln        | Leu        | Asp<br>520                | Gly        | Leu        | Ala        | Arg        | Ala<br>525 | Pro        | Gly        | Gln        |
| Pro        | Lys<br>530 | Ile        | Asp        | His        | Leu        | Arg<br>535 | Arg                       | Leu        | His        | Leu        | Gly<br>540 | Ala        | Cys        | Pro        | Thr        |
| Glu<br>545 | Glu        | Cys        | Lys        | Ala        | Cys<br>550 | Thr        | Arg                       | Cys        | Gly        | Cys<br>555 | Val        | Thr        | Met        | Leu        | Lys<br>560 |
| Ser        | Pro        | Asn        | Arg        | Thr<br>565 | Thr        | Ala        | Val                       | Lys        | Gln<br>570 | Trp        | Glu        | Gln        | Arg        | Trp<br>575 | Ile        |
| Lys        | Asn        | Cys        | Leu<br>580 | Cys        | Gly        | Gly        | Leu                       | Trp<br>585 | Trp        | Arg        | Val        | Pro        | Leu<br>590 | Ser        | Tyr        |

Pro

<210> 281  
 <211> 292  
 <212> PRT  
 <213> homo sapiens

<400> 281

|          |           |           |           |          |     |           |           |           |           |     |           |           |           |           |     |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Leu<br>1 | Arg       | Gly       | Thr       | Arg<br>5 | His | Gln       | Ser       | Pro       | Pro<br>10 | His | Arg       | Gln       | Phe       | Leu<br>15 | Ile |
| Gln      | Arg       | Cys       | Ser<br>20 | His      | Cys | Phe       | Thr       | Ala<br>25 | Val       | Val | Leu       | Leu       | Gly<br>30 | Asp       | Leu |
| Ser      | Met       | Val<br>35 | Thr       | Gln      | Pro | His       | Leu<br>40 | Val       | Gln       | Ala | Leu       | His<br>45 | Ser       | Ser       | Val |
| Gly      | Gln<br>50 | Ala       | Pro       | Arg      | Cys | Ser<br>55 | Leu       | Arg       | Arg       | Trp | Ser<br>60 | Ile       | Leu       | Gly       | Trp |
| Pro      | Gly       | Ala       | Leu       | Ala      | Arg | Pro       | Ser       | Ser       | Cys       | Arg | Val       | Ala       | Ala       | Leu       | Pro |

65

70

113

75

90

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly        | Ser        | Val        | Gly        | Ala<br>85  | Arg        | Pro        | Asn        | Cys        | Arg<br>90  | Arg        | Arg        | Gly        | Cys        | Leu<br>95  | Gly        |
| Cys        | Arg        | Arg        | Leu<br>100 | Thr        | Arg        | Pro        | Ser        | Leu<br>105 | Ala        | Gly        | Ser        | Gln        | Ser<br>110 | Arg        | Leu        |
| Gly        | Ile        | Ser<br>115 | Ser        | Trp        | Leu        | Gly        | Ser<br>120 | Arg        | Gln        | His        | Ser        | Ser<br>125 | Thr        | Ser        | Ala        |
| Ser        | Ser<br>130 | Gly        | Ser        | Leu        | Ala        | Gly<br>135 | Pro        | Ser        | Ser        | Arg        | Gln<br>140 | Gln        | Ile        | Gln        | Ser        |
| Leu<br>145 | Val        | Ser        | Arg        | Arg        | Lys<br>150 | Ser        | Arg        | Asp        | Met        | Leu<br>155 | Ser        | Trp        | Val        | Ser        | Glu<br>160 |
| Val        | Ala        | Val        | Tyr        | Thr<br>165 | Gly        | Arg        | Gln        | Leu        | Gly<br>170 | Phe        | Arg        | Arg        | Pro        | Gln<br>175 | Met        |
| Arg        | Met        | Thr        | Thr<br>180 | Ile        | Asn        | Ser        | Arg        | Ser<br>185 | Met        | Pro        | Ser        | Glu        | Val<br>190 | Pro        | Ser        |
| Arg        | Arg        | Lys<br>195 | Leu        | Trp        | Pro        | Gly        | Leu<br>200 | Ser        | Arg        | Glu        | Pro        | Trp<br>205 | Leu        | Gly        | Arg        |
| Leu        | Ala<br>210 | Ser        | Arg        | Tyr        | Ser        | Thr<br>215 | Lys        | Ser        | Pro        | Thr        | His<br>220 | Cys        | Lys        | Ser        | Cys        |
| Cys<br>225 | Ser        | Ala        | Cys        | Ser        | Val<br>230 | Phe        | Met        | Ser        | Ser        | Thr<br>235 | Asn        | Ser        | Ser        | Val        | Leu<br>240 |
| Arg        | Leu        | Ile        | Met        | Thr<br>245 | Leu        | Ser        | Met        | Ser        | Thr<br>250 | Ser        | Val        | Ile        | Leu        | Val<br>255 | Gln        |
| Ile        | Ser        | Val        | Ser<br>260 | Arg        | Ser        | Pro        | Gly        | Leu<br>265 | Leu        | Ser        | Gly        | Val        | Leu<br>270 | Arg        | Lys        |
| Trp        | Gly        | Arg<br>275 | Ser        | Ser        | Asp        | Phe        | Arg<br>280 | Val        | Glu        | Leu        | Met        | Ala<br>285 | Met        | Arg        | Lys        |
| Ser        | Leu<br>290 | Val        | Trp        |            |            |            |            |            |            |            |            |            |            |            |            |

&lt;210&gt; 282

&lt;211&gt; 172

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 282

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |           |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|
| Thr<br>1   | Pro        | Ala        | Leu        | Arg<br>5   | Ala        | Arg        | 119<br>Ser | Leu        | Arg<br>10  | Asp        | Arg        | Cys        | Ala        | Arg<br>15 | Ala        |
| Pro        | Cys        | Pro        | His<br>20  | Gly        | Gly        | Gln        | Gln        | Arg<br>25  | Arg        | Arg        | Arg        | Arg        | Leu<br>30  | Asn       | Ala        |
| Glu        | Gly        | Ala<br>35  | Glu        | Gly        | Ala        | Arg        | Gly<br>40  | Gly        | Gly        | Ser        | Ser        | Tyr<br>45  | Ser        | Glu       | Met        |
| Ala        | Glu<br>50  | Thr        | Val        | Ala        | Asp        | Thr<br>55  | Arg        | Arg        | Leu        | Ile        | Thr<br>60  | Lys        | Pro        | Gln       | Asn        |
| Leu<br>65  | Asn        | Asp        | Ala        | Tyr        | Gly<br>70  | Pro        | Pro        | Ser        | Asn        | Phe<br>75  | Leu        | Glu        | Ile        | Asp       | Val<br>80  |
| Ser        | Asn        | Pro        | Gln        | Thr<br>85  | Val        | Gly        | Val        | Gly        | Arg<br>90  | Gly        | Arg        | Phe        | Thr        | Thr<br>95 | Tyr        |
| Glu        | Ile        | Arg        | Val<br>100 | Lys        | Thr        | Asn        | Leu        | Pro<br>105 | Ile        | Phe        | Lys        | Leu        | Lys<br>110 | Glu       | Ser        |
| Thr        | Val        | Arg<br>115 | Arg        | Arg        | Tyr        | Ser        | Asp<br>120 | Phe        | Glu        | Trp        | Leu        | Arg<br>125 | Ser        | Glu       | Leu        |
| Glu        | Arg<br>130 | Glu        | Ser        | Lys        | Val        | Val<br>135 | Val        | Pro        | Pro        | Leu        | Pro<br>140 | Gly        | Lys        | Ala       | Phe        |
| Leu<br>145 | Arg        | Gln        | Phe        | Leu        | Leu<br>150 | Glu        | Glu        | Met        | Met        | Glu<br>155 | Tyr        | Leu        | Met        | Thr       | Ile<br>160 |
| Leu        | Leu        | Arg        | Lys        | Glu<br>165 | Asn        | Lys        | Gly        | Trp        | Ser<br>170 | Ser        | Leu        |            |            |           |            |

<210> 283  
 <211> 106  
 <212> PRT  
 <213> homo sapiens

<400> 283

|          |           |           |           |          |     |           |           |           |           |     |           |           |           |           |     |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Asn<br>1 | Tyr       | Leu       | Gly       | Arg<br>5 | Phe | Gln       | Pro       | Gln       | Trp<br>10 | Phe | Asn       | Asp       | Asn       | Lys<br>15 | Thr |
| Thr      | Lys       | His       | Gly<br>20 | Thr      | Ser | Asn       | Ser       | Leu<br>25 | Ile       | Lys | Leu       | Leu       | Ser<br>30 | His       | Leu |
| Phe      | His       | Arg<br>35 | Met       | Met      | Arg | Phe       | Phe<br>40 | Leu       | Phe       | Thr | Val       | Ser<br>45 | His       | Gln       | Gly |
| Lys      | Lys<br>50 | Asn       | Pro       | Pro      | Thr | Ser<br>55 | Cys       | Leu       | Phe       | Phe | Phe<br>60 | Leu       | Met       | Pro       | Gly |
| Ile      | Ser       | Ile       | His       | Cys      | Leu | Phe       | Lys       | Arg       | Pro       | Met | Gln       | Lys       | Lys       | Val       | Asp |

|     |     |     |            |           |     |     |     |            |           |     |     |     |     |           |     |
|-----|-----|-----|------------|-----------|-----|-----|-----|------------|-----------|-----|-----|-----|-----|-----------|-----|
| 65  |     |     |            |           | 70  |     |     | 120        |           |     | 75  |     |     |           | 80  |
| Lys | Ala | Leu | Ala        | Gln<br>85 | Glu | Leu | Gly | Leu        | Pro<br>90 | Val | Val | Val | Pro | Gly<br>95 | Leu |
| Pro | Cys | Trp | Gly<br>100 | Val       | Pro | Lys | Ser | Val<br>105 | Pro       |     |     |     |     |           |     |

<210> 284  
 <211> 105  
 <212> PRT  
 <213> homo sapiens

<400> 284

|           |           |           |            |           |           |           |           |            |           |           |           |           |           |           |           |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Met<br>1  | Gly       | Asn       | Phe        | Phe<br>5  | Phe       | Phe       | Glu       | Pro        | Gly<br>10 | Thr       | Cys       | Tyr       | Val       | Ala<br>15 | Gln       |
| Ala       | Gly       | Leu       | Glu<br>20  | Leu       | Leu       | Asn       | Ser       | Ser<br>25  | Asp       | Pro       | Leu       | Thr       | Ser<br>30 | Ala       | Ser       |
| Gln       | Ile       | Ala<br>35 | Glu        | Thr       | Thr       | Gly       | Thr<br>40 | His        | His       | Cys       | Thr       | Trp<br>45 | Leu       | Lys       | Thr       |
| Ile       | Phe<br>50 | Leu       | Lys        | Asn       | Lys       | Ser<br>55 | Thr       | Ala        | Leu       | His       | Leu<br>60 | Tyr       | Leu       | Leu       | Val       |
| Ser<br>65 | Leu       | Gln       | Phe        | Lys       | His<br>70 | Thr       | Ile       | Asn        | Asp       | Tyr<br>75 | Asn       | Ile       | Leu       | Phe       | Lys<br>80 |
| Ala       | Gly       | Arg       | Ser        | Gly<br>85 | Ser       | Trp       | Leu       | Gln        | Leu<br>90 | Glu       | Gln       | Phe       | Ile       | Thr<br>95 | Ser       |
| Gly       | Tyr       | Leu       | Arg<br>100 | Ala       | Arg       | Lys       | Ile       | Gln<br>105 |           |           |           |           |           |           |           |

<210> 285  
 <211> 118  
 <212> PRT  
 <213> homo sapiens

<400> 285

|          |           |           |           |          |     |           |           |           |           |     |           |           |           |           |     |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Thr<br>1 | Gly       | Met       | Gly       | Gly<br>5 | Gly | Ser       | Gly       | Cys       | Arg<br>10 | Glu | Leu       | Leu       | Cys       | Pro<br>15 | Cys |
| Lys      | Gly       | Ala       | Glu<br>20 | Thr      | Pro | Val       | Glu       | Leu<br>25 | Arg       | Lys | Ser       | Asp       | Gly<br>30 | Ile       | Tyr |
| Arg      | Val       | Leu<br>35 | Gly       | Lys      | Pro | Trp       | Leu<br>40 | Cys       | Leu       | His | His       | Gly<br>45 | Glu       | Arg       | Pro |
| Trp      | Ala<br>50 | Gly       | Ser       | Pro      | Pro | Ser<br>55 | Cys       | Arg       | Ser       | Val | Arg<br>60 | Leu       | Asp       | Ala       | Asp |



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Ser | Asp | Gln | Leu | Ala | Ser | Val | Ser | Leu | Arg | His | Glu | Ala | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Phe | Ser | Ser | Gly | Phe | Gln | Ser | His | Ser | Gly | Leu | Pro | Met | Ala | Asp | Arg |
|     |     |     |     | 35  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Val | Ala | Lys | Val | Arg | Asn | Gly | Lys | Cys | Ile | Ala | Val | Tyr | Leu | Pro | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Thr | Lys | Gln | Ile | Thr |     |     |     |     |     |     |     |     |     |     |
|     |     | 115 |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 286  
 <211> 109  
 <212> PRT  
 <213> homo sapiens

<400> 286

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ala | Asn | Gln | Ser | Ser | Ser | Leu | Arg | Phe | Lys | Ile | Lys | Tyr | Lys | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Cys | Phe | Ser | Thr | His | Ser | Gly | Ser | Ile | Val | Pro | Glu | Pro | Asp | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Tyr | Phe | Phe | Ile | Leu | Asn | Ile | Ile | Phe | Pro | His | Leu | Ile | Cys | Leu | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Ile | His | Arg | His | Leu | Glu | Lys | Glu | Met | Gly | Gly | Cys | Leu | Leu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Ser | Leu | Cys | Phe | Val | Pro | Val | Val | Arg | Leu | Ala | Ala | Ser | Val | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Arg | Trp | Ala | Trp | Leu | Glu | Pro | Trp | Val | Arg | Gln | Val | Ala | Gly | Gly | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Glu | Arg | Leu | Arg | Gly | Lys | Trp | Trp | His | Leu | Leu | Leu |     |     |     |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     |     |     |

<210> 287  
 <211> 74  
 <212> PRT  
 <213> homo sapiens

<400> 287

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gln | Leu | Leu | Gly | Arg | Leu | Arg | Gln | Glu | Asn | His | Leu | Asn | Ser | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Arg | Gly | Cys | Ser | Glu | Leu | Arg | Ser | Cys | His | Cys | Thr | Pro | Ala | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Thr | Arg | Val | Lys | Leu | Arg | Leu | Lys | Lys | Lys | Lys | Lys | Glu | Met | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |

Phe Ile Phe Phe Met Leu Ser Ile Gln Ala Leu Phe His Gly Gln Gln  
50 55 60

Val Ile Phe His Asn Val Asp Phe Pro Lys  
65 70

<210> 288  
<211> 67  
<212> PRT  
<213> homo sapiens

<400> 288

Arg Arg Gly Phe Leu His Val Gly Gln Ala Gly Leu Glu Phe Leu Thr  
1 5 10 15

Ser Gly Asp Pro Pro Ala Ser Ala Thr Gln Ser Ala Gly Ile Thr Gly  
20 25 30

Ile Ser His Arg Glu Arg Pro Ile Leu Leu Phe Ile Tyr Phe Leu Arg  
35 40 45

Trp Ser Leu Ala Leu Phe Arg Asp Leu Arg Pro Leu Gln Pro Ser Pro  
50 55 60

Leu Gln Phe  
65

<210> 289  
<211> 84  
<212> PRT  
<213> homo sapiens

<400> 289

Ser Thr Arg Pro Arg Glu Arg Arg Asn Arg Ser Val Asp Glu Cys Gln  
1 5 10 15

Leu Ile Asn Val Lys Xxx Arg His Xxx Leu Val Cys Leu Xxx Cys Phe  
20 25 30

Cys Leu Tyr Xxx Gln Pro Asp Xxx Val Ser Xxx Glu Tyr Lys Xxx Trp  
35 40 45

Gly Leu Leu Pro Gln Xxx Leu Phe Xxx Ile Ser Xxx Glu Lys Lys Asn  
50 55 60

Asp Arg Xxx Xxx Gly Xxx Ile Xxx Arg Xxx Ala Arg Phe Xxx Ser Thr  
65 70 75 80

Asn Xxx Asn Xxx

<210> 290  
<211> 77  
<212> PRT  
<213> homo sapiens

&lt;400&gt; 290

|           |           |           |           |          |           |           |           |           |           |           |           |           |           |           |     |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| Met<br>1  | Ser       | Xxx       | Xxx       | Asp<br>5 | Thr       | Xxx       | Trp       | Cys       | Val<br>10 | Xxx       | Ala       | Val       | Phe       | Ala<br>15 | Phe |
| Thr       | Xxx       | Asn       | Pro<br>20 | Thr      | Val       | Phe       | His       | Xxx<br>25 | Asn       | Thr       | Asn       | Xxx       | Gly<br>30 | Xxx       | Phe |
| Tyr       | Pro       | Xxx<br>35 | Leu       | Ser      | Ser       | Xxx       | Leu<br>40 | Val       | Lys       | Lys       | Lys       | Lys<br>45 | Met       | Ile       | Gly |
| Xxx       | Xxx<br>50 | Xxx       | Glu       | Phe      | Xxx       | Gly<br>55 | Lys       | Pro       | Xxx       | Xxx       | Gln<br>60 | Ala       | Leu       | Xxx       | Lys |
| Ile<br>65 | Xxx       | Ser       | Trp       | Xxx      | Xxx<br>70 | Leu       | Thr       | Ser       | Leu       | Pro<br>75 | Xxx       | Xxx       |           |           |     |

&lt;210&gt; 291

&lt;211&gt; 309

&lt;212&gt; PRT

&lt;213&gt; homo sapiens

&lt;400&gt; 291

|            |            |            |            |           |            |            |            |            |           |            |            |            |            |           |            |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Arg<br>1   | Ala        | Ala        | Ser        | Gly<br>5  | Arg        | Ser        | Gly        | Ser        | Ser<br>10 | Val        | Arg        | Met        | Ser        | Ala<br>15 | Pro        |
| Arg        | Ser        | Arg        | Pro<br>20  | Ala       | Ser        | Met        | Arg        | Trp<br>25  | Cys       | Pro        | Ala        | Pro        | Arg<br>30  | Arg       | Ala        |
| Cys        | Thr        | Thr<br>35  | Ser        | Thr       | Arg        | Trp        | Thr<br>40  | Gly        | Pro       | Pro        | Cys        | Ala<br>45  | Thr        | Ser       | Thr        |
| Ser        | Ser<br>50  | Ala        | Arg        | Ala       | Thr        | Arg<br>55  | Thr        | Gly        | Pro       | Ser        | Cys<br>60  | Arg        | Ser        | Ala       | Gly        |
| Arg<br>65  | Ala        | Arg        | Ser        | Ala       | Ser<br>70  | Tyr        | Pro        | Pro        | Gly       | Asp<br>75  | Val        | Asp        | Glu        | Ile       | Pro<br>80  |
| Asp        | Trp        | Val        | His        | Gln<br>85 | Leu        | Val        | Ile        | Gln        | Lys<br>90 | Leu        | Val        | Glu        | His        | Arg<br>95 | Val        |
| Ile        | Pro        | Glu        | Gly<br>100 | Phe       | Val        | Asn        | Ser        | Ala<br>105 | Val       | Ile        | Asn        | Asp        | Tyr<br>110 | Gln       | Pro        |
| Gly        | Gly        | Cys<br>115 | Ile        | Val       | Ser        | His        | Val<br>120 | Asp        | Pro       | Ile        | His        | Ile<br>125 | Phe        | Glu       | Arg        |
| Pro        | Ile<br>130 | Val        | Ser        | Val       | Ser        | Phe<br>135 | Phe        | Ser        | Asp       | Ser        | Ala<br>140 | Leu        | Cys        | Phe       | Gly        |
| Cys<br>145 | Lys        | Phe        | Gln        | Phe       | Lys<br>150 | Pro        | Ile        | Arg        | Val       | Ser<br>155 | Glu        | Pro        | Val        | Leu       | Ser<br>160 |

|                    |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |  |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Leu                | Pro        | Val        | Arg        | Arg<br>165 | Gly        | Ser        | Val        | Thr        | Val<br>170 | Leu        | Ser        | Gly        | Tyr        | Ala<br>175 | Ala        |  |
| Asp                | Glu        | Ile        | Thr<br>180 | His        | Cys        | Ile        | Arg        | Pro<br>185 | Gln        | Asp        | Ile        | Lys        | Glu<br>190 | Arg        | Arg        |  |
| Ala                | Val        | Ile<br>195 | Ile        | Leu        | Arg        | Lys        | Thr<br>200 | Arg        | Leu        | Asp        | Ala        | Pro<br>205 | Arg        | Leu        | Glu        |  |
| Thr                | Lys<br>210 | Ser        | Leu        | Ser        | Ser        | Ser<br>215 | Val        | Leu        | Pro        | Pro        | Ser<br>220 | Tyr        | Ala        | Ser        | Asp        |  |
| Arg<br>225         | Leu        | Ser        | Gly        | Asn        | Asn<br>230 | Arg        | Asp        | Pro        | Ala        | Leu<br>235 | Lys        | Pro        | Lys        | Arg        | Ser<br>240 |  |
| His                | Arg        | Lys        | Ala        | Asp<br>245 | Pro        | Asp        | Ala        | Ala        | His<br>250 | Arg        | Pro        | Arg        | Ile        | Leu<br>255 | Glu        |  |
| Met                | Asp        | Lys        | Glu<br>260 | Glu        | Asn        | Arg        | Arg        | Ser<br>265 | Val        | Leu        | Leu        | Pro        | Thr<br>270 | His        | Arg        |  |
| Arg                | Arg        | Gly<br>275 | Ser        | Phe        | Ser        | Ser        | Glu<br>280 | Asn        | Tyr        | Trp        | Arg        | Lys<br>285 | Ser        | Tyr        | Glu        |  |
| Ser                | Ser<br>290 | Glu        | Asp        | Cys        | Ser        | Glu<br>295 | Ala        | Ala        | Gly        | Ser        | Pro<br>300 | Ala        | Arg        | Lys        | Val        |  |
| Lys<br>305         | Met        | Arg        | Arg        | His        |            |            |            |            |            |            |            |            |            |            |            |  |
| <210> 292          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |  |
| <211> 191          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |  |
| <212> PRT          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |  |
| <213> homo sapiens |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |  |
| <400> 292          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |  |
| Ser<br>1           | Cys        | Leu        | Pro        | Glu<br>5   | Asp        | Asp        | Asp        | Cys        | Ser<br>10  | Ala        | Leu        | Leu        | Asp        | Val<br>15  | Leu        |  |
| Arg                | Pro        | Tyr        | Ala<br>20  | Val        | Ser        | Asp        | Phe        | Ile<br>25  | Ser        | Ser        | Ile        | Ser        | Thr<br>30  | Glu        | His        |  |
| Ser                | His        | Ala<br>35  | Ser        | Pro        | Ala        | His        | Arg<br>40  | Gln        | Gly        | Lys        | His        | Trp<br>45  | Phe        | Arg        | His        |  |
| Pro                | Asn<br>50  | Arg        | Leu        | Glu        | Leu        | Glu<br>55  | Leu        | Ala        | Ala        | Glu        | Ala<br>60  | Gln        | Arg        | Arg        | Val        |  |
| Ala<br>65          | Lys        | Glu        | Gly        | His        | Gly<br>70  | His        | Asp        | Gly        | Ala        | Leu<br>75  | Glu        | Asp        | Val        | Asp        | Gly<br>80  |  |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val        | His        | Val        | Gly        | His<br>35  | Asp        | Ala        | Ala        | Ala        | Gly<br>90  | Leu        | Val        | Val        | Val        | Asp<br>95  | Asp        |
| Arg        | Ala        | Val        | Asp<br>100 | Glu        | Ala        | Leu        | Gly        | Asp<br>105 | Asp        | Ala        | Val        | Leu        | His<br>110 | Gln        | Leu        |
| Leu        | Asp        | His<br>115 | Gln        | Leu        | Met        | His        | Pro<br>120 | Val        | Arg        | Asp        | Leu        | Val<br>125 | Asp        | Val        | Ala        |
| Arg        | Arg<br>130 | Val        | Arg        | Gly        | Ala        | Pro<br>135 | Gly        | Pro        | Ala        | Arg        | Ala<br>140 | Ser        | Ala        | Ala        | Gly        |
| Pro<br>145 | Arg        | Thr        | Cys        | Ser        | Pro<br>150 | Arg        | Arg        | Arg        | Ser        | Thr<br>155 | Cys        | Cys        | Ala        | Gly        | Gly<br>160 |
| Pro        | Gly        | Pro        | Pro        | Cys<br>165 | Ala        | Arg        | Cys        | Thr        | Gly<br>170 | Pro        | Ser        | Arg        | Arg        | Gly<br>175 | Thr        |
| Pro        | Pro        | His        | Arg<br>180 | Cys        | Gly        | Pro        | Arg        | Ser<br>185 | Trp        | Ser        | Thr        | His        | Pro<br>190 | Asp        |            |

<210> 293  
 <211> 478  
 <212> PRT  
 <213> homo sapiens

<400> 293

|           |           |            |            |           |           |           |            |            |           |           |           |            |            |           |           |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Met<br>1  | Gly       | Arg        | Cys        | Cys<br>5  | Phe       | Tyr       | Thr        | Ala        | Gly<br>10 | Thr       | Leu       | Ser        | Leu        | Leu<br>15 | Leu       |
| Leu       | Val       | Thr        | Ser<br>20  | Val       | Thr       | Leu       | Leu        | Val<br>25  | Ala       | Arg       | Val       | Phe        | Gln<br>30  | Lys       | Ala       |
| Val       | Asp       | Gln<br>35  | Ser        | Ile       | Glu       | Lys       | Lys<br>40  | Ile        | Val       | Leu       | Arg       | Asn<br>45  | Gly        | Thr       | Glu       |
| Ala       | Phe<br>50 | Asp        | Ser        | Trp       | Glu       | Lys<br>55 | Pro        | Pro        | Leu       | Pro       | Val<br>60 | Tyr        | Thr        | Gln       | Phe       |
| Tyr<br>65 | Phe       | Phe        | Asn        | Val       | Thr<br>70 | Asn       | Pro        | Glu        | Glu       | Ile<br>75 | Leu       | Arg        | Gly        | Glu       | Thr<br>80 |
| Pro       | Arg       | Val        | Glu        | Glu<br>85 | Val       | Gly       | Pro        | Tyr        | Thr<br>90 | Tyr       | Arg       | Glu        | Leu        | Arg<br>95 | Asn       |
| Lys       | Ala       | Asn        | Ile<br>100 | Gln       | Phe       | Gly       | Asp        | Asn<br>105 | Gly       | Thr       | Thr       | Ile        | Ser<br>110 | Ala       | Val       |
| Ser       | Asn       | Lys<br>115 | Ala        | Tyr       | Val       | Phe       | Glu<br>120 | Arg        | Asp       | Gln       | Ser       | Val<br>125 | Gly        | Asp       | Pro       |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Lys        | Ile<br>130 | Asp        | Leu        | Ile        | Arg        | Thr<br>135 | Leu        | Asn        | Ile        | Pro        | Val<br>140 | Leu        | Thr        | Val        | Ile        |
| Glu<br>145 | Trp        | Ser        | Gln        | Val        | His<br>150 | Phe        | Leu        | Arg        | Glu        | Ile<br>155 | Ile        | Glu        | Ala        | Met        | Leu<br>160 |
| Lys        | Ala        | Tyr        | Gln        | Gln<br>165 | Lys        | Leu        | Phe        | Val        | Thr<br>170 | His        | Thr        | Val        | Asp        | Glu<br>175 | Leu        |
| Leu        | Trp        | Gly        | Tyr<br>180 | Lys        | Asp        | Glu        | Ile        | Leu<br>185 | Ser        | Leu        | Ile        | His        | Val<br>190 | Phe        | Arg        |
| Pro        | Asp        | Ile<br>195 | Ser        | Pro        | Tyr        | Phe        | Gly<br>200 | Leu        | Phe        | Tyr        | Glu        | Lys<br>205 | Asn        | Gly        | Thr        |
| Asn        | Asp<br>210 | Gly        | Asp        | Tyr        | Val        | Phe<br>215 | Leu        | Thr        | Gly        | Glu        | Asp<br>220 | Ser        | Tyr        | Leu        | Asn        |
| Phe<br>225 | Thr        | Lys        | Ile        | Val        | Glu<br>230 | Trp        | Asn        | Gly        | Lys        | Thr<br>235 | Ser        | Leu        | Asp        | Trp        | Trp<br>240 |
| Ile        | Thr        | Asp        | Lys        | Cys<br>245 | Asn        | Met        | Ile        | Asn        | Gly<br>250 | Thr        | Asp        | Gly        | Asp        | Ser<br>255 | Phe        |
| His        | Pro        | Leu        | Ile<br>260 | Thr        | Lys        | Asp        | Glu        | Val<br>265 | Leu        | Tyr        | Val        | Phe        | Pro<br>270 | Ser        | Asp        |
| Phe        | Cys        | Arg<br>275 | Ser        | Val        | Tyr        | Ile        | Thr<br>280 | Phe        | Ser        | Asp        | Tyr        | Glu<br>285 | Ser        | Val        | Gln        |
| Gly        | Leu<br>290 | Pro        | Ala        | Phe        | Arg        | Tyr<br>295 | Lys        | Val        | Pro        | Ala        | Glu<br>300 | Ile        | Leu        | Ala        | Asn        |
| Thr<br>305 | Ser        | Asp        | Asn        | Ala        | Gly<br>310 | Phe        | Cys        | Ile        | Pro        | Glu<br>315 | Gly        | Asn        | Cys        | Leu        | Gly<br>320 |
| Ser        | Gly        | Val        | Leu        | Asn<br>325 | Val        | Ser        | Ile        | Cys        | Lys<br>330 | Asn        | Gly        | Ala        | Pro        | Ile<br>335 | Ile        |
| Met        | Ser        | Phe        | Pro<br>340 | His        | Phe        | Tyr        | Gln        | Ala<br>345 | Asp        | Glu        | Arg        | Phe        | Val<br>350 | Ser        | Ala        |
| Ile        | Glu        | Gly<br>355 | Met        | His        | Pro        | Asn        | Gln<br>360 | Glu        | Asp        | His        | Glu        | Thr<br>365 | Phe        | Val        | Asp        |
| Ile        | Asn<br>370 | Pro        | Leu        | Thr        | Gly        | Ile<br>375 | Ile        | Leu        | Lys        | Ala        | Ala<br>380 | Lys        | Arg        | Phe        | Gln        |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ile<br>385 | Asn        | Ile        | Tyr        | Val        | Lys<br>390 | Lys        | Leu        | Asp        | Asp        | Phe<br>395 | Val        | Glu        | Thr        | Gly        | Asp<br>400 |
| Ile        | Arg        | Thr        | Met        | Val<br>405 | Phe        | Pro        | Val        | Met        | Tyr<br>410 | Leu        | Asn        | Glu        | Ser        | Val<br>415 | His        |
| Ile        | Asp        | Lys        | Glu<br>420 | Thr        | Ala        | Ser        | Arg        | Leu<br>425 | Lys        | Ser        | Met        | Ile        | Asn<br>430 | Thr        | Thr        |
| Leu        | Ile        | Ile<br>435 | Thr        | Asn        | Ile        | Pro        | Tyr<br>440 | Ile        | Ile        | Met        | Ala        | Leu<br>445 | Gly        | Val        | Phe        |
| Phe        | Gly<br>450 | Leu        | Val        | Phe        | Thr        | Trp<br>455 | Leu        | Ala        | Cys        | Lys        | Gly<br>460 | Gln        | Gly        | Ser        | Met        |
| Asp<br>465 | Glu        | Gly        | Thr        | Ala        | Asp<br>470 | Glu        | Arg        | Ala        | Pro        | Leu<br>475 | Ile        | Arg        | Thr        |            |            |

<210> 294  
 <211> 266  
 <212> PRT  
 <213> homo sapiens  
 <400> 294

|           |            |            |            |           |           |            |            |            |           |           |            |            |            |           |           |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Ala<br>1  | Phe        | Leu        | Pro        | Ser<br>5  | Pro       | Thr        | Val        | Ala        | Ala<br>10 | Gln       | Ala        | Ala        | Ala        | Arg<br>15 | Glu       |
| His       | Ala        | Gly        | Gly<br>20  | His       | Ser       | Ala        | Ala        | Lys<br>25  | Asn       | Gly       | Ala        | Thr        | Gly<br>30  | Val       | Glu       |
| Leu       | Asp        | Ile<br>35  | Glu        | Phe       | Thr       | Ser        | Asp<br>40  | Gly        | Ile       | Pro       | Val        | Leu<br>45  | Met        | His       | Asp       |
| Asn       | Thr<br>50  | Val        | Asp        | Arg       | Thr       | Thr<br>55  | Asp        | Gly        | Thr       | Gly       | Arg<br>60  | Leu        | Cys        | Asp       | Leu       |
| Thr<br>65 | Phe        | Glu        | Gln        | Ile       | Arg<br>70 | Lys        | Leu        | Asn        | Pro       | Ala<br>75 | Ala        | Asn        | His        | Arg       | Leu<br>80 |
| Arg       | Asn        | Asp        | Phe        | Pro<br>85 | Asp       | Glu        | Lys        | Ile        | Pro<br>90 | Thr       | Leu        | Arg        | Glu        | Ala<br>95 | Val       |
| Ala       | Glu        | Cys        | Leu<br>100 | Asn       | His       | Asn        | Leu        | Thr<br>105 | Ile       | Phe       | Phe        | Asp        | Val<br>110 | Lys       | Gly       |
| His       | Ala        | His<br>115 | Lys        | Ala       | Thr       | Glu        | Ala<br>120 | Leu        | Lys       | Lys       | Met        | Tyr<br>125 | Met        | Glu       | Phe       |
| Pro       | Gln<br>130 | Leu        | Tyr        | Asn       | Asn       | Ser<br>135 | Val        | Val        | Cys       | Ser       | Phe<br>140 | Leu        | Pro        | Glu       | Val       |

|            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ile<br>145 | Tyr        | Lys        | Met        | Arg        | Gln<br>150 | Thr        | Asp        | Arg        | Asp        | Val<br>155 | Ile        | Thr        | Ala        | Leu        | Thr<br>160 |
| His        | Arg        | Pro        | Trp        | Ser<br>165 | Leu        | Ser        | His        | Thr        | Gly<br>170 | Asp        | Gly        | Lys        | Pro        | Arg<br>175 | Tyr        |
| Asp        | Thr        | Phe        | Trp<br>180 | Lys        | His        | Phe        | Ile        | Phe<br>185 | Val        | Met        | Met        | Asp        | Ile<br>190 | Leu        | Leu        |
| Asp        | Trp        | Ser<br>195 | Met        | His        | Asn        | Ile        | Leu<br>200 | Trp        | Tyr        | Leu        | Cys        | Gly<br>205 | Ile        | Ser        | Ala        |
| Phe        | Leu<br>210 | Met        | Gln        | Lys        | Asp        | Phe<br>215 | Val        | Ser        | Pro        | Ala        | Tyr<br>220 | Leu        | Lys        | Lys        | Trp        |
| Ser<br>225 | Ala        | Lys        | Gly        | Ile        | Gln<br>230 | Val        | Val        | Gly        | Trp        | Thr<br>235 | Val        | Asn        | Thr        | Phe        | Asp<br>240 |
| Glu        | Lys        | Ser        | Tyr        | Tyr<br>245 | Glu        | Ser        | His        | Leu        | Gly<br>250 | Ser        | Ser        | Tyr        | Ile        | Thr<br>255 | Asp        |
| Ser        | Met        | Val        | Glu<br>260 | Asp        | Cys        | Glu        | Pro        | His<br>265 | Phe        |            |            |            |            |            |            |

<210> 295  
 <211> 165  
 <212> PRT  
 <213> homo sapiens  
 <400> 295

|           |           |           |            |           |           |           |           |            |           |           |           |           |            |           |           |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Gln<br>1  | Ile       | Leu       | Pro        | Ala<br>5  | Phe       | Ile       | Leu       | Leu        | Phe<br>10 | Asn       | Gly       | Leu       | Lys        | Arg<br>15 | Ala       |
| Tyr       | Ala       | Cys       | His<br>20  | Ala       | Glu       | His       | Glu       | Thr<br>25  | Glu       | Glu       | Leu       | Gly       | Ser<br>30  | Asp       | Glu       |
| Asp       | Asp       | Ile<br>35 | Asp        | Glu       | Asp       | Gly       | Gln<br>40 | Glu        | Tyr       | Leu       | Glu       | Ile<br>45 | Leu        | Ala       | Lys       |
| Gln       | Ala<br>50 | Gly       | Glu        | Asp       | Gly       | Asp<br>55 | Asp       | Glu        | Asp       | Trp       | Glu<br>60 | Glu       | Asp        | Asp       | Ala       |
| Glu<br>65 | Glu       | Thr       | Ala        | Leu       | Glu<br>70 | Gly       | Tyr       | Ser        | Thr       | Ile<br>75 | Ile       | Asp       | Asp        | Glu       | Asp<br>80 |
| Asn       | Pro       | Val       | Asp        | Glu<br>85 | Tyr       | Gln       | Ile       | Phe        | Lys<br>90 | Ala       | Ile       | Phe       | Gln        | Thr<br>95 | Ile       |
| Gln       | Asn       | Arg       | Asn<br>100 | Pro       | Val       | Trp       | Tyr       | Gln<br>105 | Ala       | Leu       | Thr       | His       | Gly<br>110 | Leu       | Asn       |



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